



SPARKS JOURNAL

★★★★ SOCIETY OF WIRELESS PIONEERS INC ★★★★★

LEGENDS OF THE WIRELESS PIONEERS

Adventure & Experiences of Professional Brass Pounders Around the World



RECORDING THE EARLY HISTORY & DEVELOPMENT OF THE WIRELESS

VOLUME 7, NO.3 - MARCH 1985

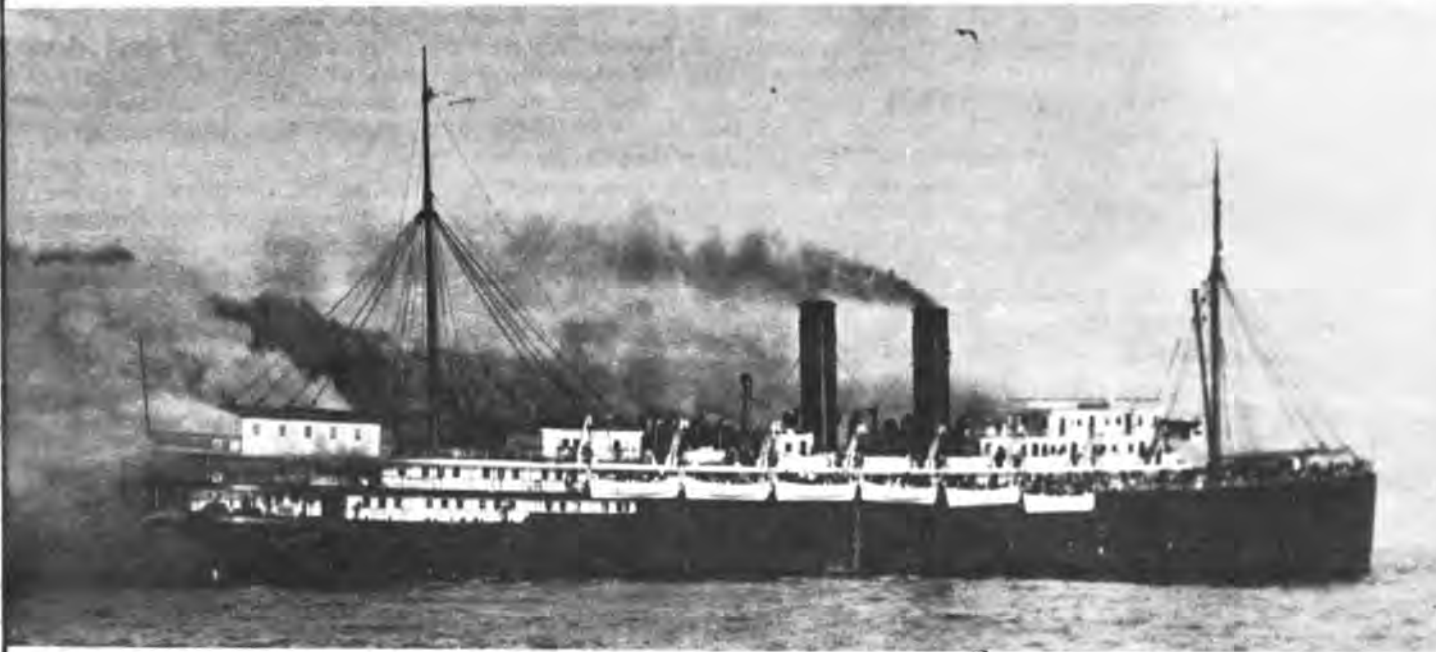
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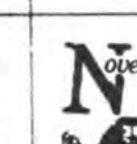
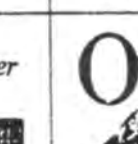

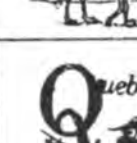

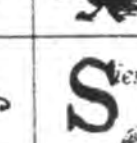



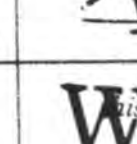
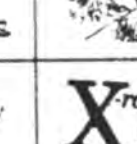



PACIFIC OCEAN WIRELESS

Early Wireless On The Pacific Coast

SOS WGT - FIRE!



- Universal - Illustrated Phonetic Alphabet

A <i>Alfa</i> 	B <i>Bravo</i> 	C <i>Charlie</i> 	D <i>Delta</i> 	E <i>Echo</i> 
F <i>Foxtrot</i> 	G <i>Golf</i> 	H <i>Hotel</i> 	I <i>India</i> 	J <i>Juliott</i> 
K <i>Kilo</i> 	L <i>Lima</i> 	M <i>Mike</i> 	N <i>November</i> 	O <i>Oscar</i> 
P <i>Papa</i> 	Q <i>Quebec</i> 	R <i>Romeo</i> 	S <i>Sierra</i> 	T <i>Tango</i> 
U <i>Uniform</i> 	V <i>Victor</i> 	W <i>Whiskey</i> 	X <i>X-ray</i> 	Y <i>Yankee</i> 
Z <i>Zulu</i> 				

S.S. Congress, Flagship PCSS. Co. Burns

428 Saved. Hull Gutted by Inferno but Salvaged

SS. CONGRESS - Built 1913 as Flagship of Pacific Coast S.S. Co., Caught fire Sept. 14 1916 off Coos Bay Ore. SOS sent by Henry Dickow brought the P.E. Mitchie (dredge) which picked up 253 passengers and 175 crew. The Congress was enroute Seattle from San Francisco. The fire became a terrible inferno which even melted some of the ironwork. However hull still floated after fire burned out so hull was towed to Seattle where she was rebuilt with passenger accommodations for the China Mail SS Co., and placed on China run as the SS NANKING/KKEE (Later after financial problems she was taken over by PCSS Co., and renamed the SS Emma Alexander/WGCN. Laid up late 1930s she was recalled to service and became the SS Empire Woodlark under the Union Jack. She 'weathered the war years'. Final QTH not known. The Congress was 424 feet long and 7793 tons. Second Operator was believed to be Charles A. Lindh but not confirmed.

← New ABCs of Radio

The 26 words make up the new alphabet adopted by the International Civil Aviation Organization [ICAO]. They are intended for use by pilots, radiomen and control-tower operators when poor communications or language difficulties make it advisable to spell out words.

This is the second revision of the ABLE, BAKER, CHARLIE alphabet that millions of GIs learned during World War II.

To qualify for the ICAO alphabet, every word had to meet rigid requirements: (1) begin with the letter that it represents; (2) be pronounced with understandable similarity by speakers of many nations; (3) cause a minimum of confusion with other letter words; (4) have some meaning for users of most nationalities.

We wish to thank Andy Clark [1048-V] Editor, Publisher of "FLORIDA SKIP" published at 41 Lenape Drive, Miami Springs, FL 33166 for sending along this copy for our use. Incidentally Andy has a fine paper covering Amateur 'doings' throughout Florida and the SE. You would be interested in reading and perhaps subscribing to it.



SPARKS JOURNAL USPS 365-050

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Non-profit Historical Organization

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Founded 1968 by William A. Breniman

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March 28 1985

Early Days of The Wireless



The Pacific Ocean Wireless Edition

- SECTION I -

ARTICLES OF HISTORICAL INTEREST [Click on Index item below](#)

PAGE	TITLE OF ARTICLE -AUTHOR OR SOURCE
1.	Burning of the SS. Congress. Universal Illustrated Phoenetic Code
3.	The Skipper's Log. "Pathfinders of the Pacific" "Ye Ed".
4.	Names & Calls of West Coast Ships - 1910-30. Richard Johnstone
5.	Early Calls Pacific Coast Stations - Edmund Marriner
6.	"Tales of the Wireless Pioneers" - Haraden Pratt (Through #13)
14.	History of Pacific Mail SS. Co. - William G. Gerlach
17.	Roster of Ships that served Pacific Mail - W.A. Breniman
18.	"Life on the Ocean Wave: - Bill Deacon
20.	The Fanning Island Story - C. Carthers.
23.	20,000 Leagues Under the Sea - Charles W. Carthers
24.	Pirates of the China Seas - Dr. A.D. Blue (From Sea Breezes)
26.	Strange Weather Phenomenon (White Outs, Arctic Haze, etc.
27.	"Night Watch" Prof. Herbert Scott. Poem to So. Seas Brasspounder
28.	Ed Marriners Dream - Early history of wireless on the Pacific Coast with many pictures (A few supplied by other members).
39.	Former Officers of SOWP. May we always remember and thank them for their dedication and interest for fellow shipmates.
40.	Some West Coast wrench including the SS. Harvard, Santa Rosa and Mariposa.

- SECTION II -

Supplemental Edition of Sparks Journal publishes March 28 1985 and included in this issue. Titles: As Follow: [Section II is in another publication](#)

1 - 71	Register/Directory of Society members to March 15 1985
72- 85	En Route - Geographical Directory by QTH.
87 -93	Necrology Listings (Alphabetical of members).
94 108	Serial Section - Members from No. 1 to

HOW MANY WIRELESS OPERATORS COMPOSE A "WIXGLAN" ?

A flock of ships is called a fleet; a fleet of sheep is called a flock.
A flock of girls is called a bevy; a bevy of wolves is called a pack.
A pack of thieves is called a gang; a gang of angels is called a host.
A host of porpoises is called a shoal; a shoal of fish is called a school.
A school of buffalo is called a herd; a herd of seals is called a pod.
A pod of whales is called a gam; a gam of lions is called a pride.
A pride of children is called a troop; a troop of partridge is called a covey.
A covey of beauties is called a galaxy; a galaxy of ruffians is called a horde.
A horde of rubbish is called a heap; a heap of oxen is called a drove.
A drove of blackguards is called a mob; a mob of worshippers is called a congregation.
A congregation of theatergoers is called an audience; an audience of peacocks is called a muster.
A muster of doves is called a flight; a flight of larks is called an exaltation.
And if they're starlings it's a murmuration. A murmuration of bees is called a swarm. And, finally, a swarm of bishops is called a bench.
-Thatcher Collection



"I DON'T KNOW... I JUST TOLD HIM HE IS THE MOST VALUABLE MAN ABOARD"

SOCIETY OF WIRELESS PIONEERS INC

Our Wavelength — Preserving Communications History

THE FOUNDER'S PAGE



Pathfinders of the Pacific ...

William A. Benjamin

BALBOA was the first European of record to sight the vast ocean which was later named "PACIFIC" by Ferdinand Magellan in Oct. or Nov. 1492. His christened name was Vasco Nunez de Balboa - born 1475 in Spain. As a Spanish 'Conquistador' he became leader of the first lasting European settlements on the American mainland at Antigua in Darien, Panama. While there, encouraged by Indian tales of a wealthy kingdom on the "other sea", he led an expedition in 1513 across the Isthmus and saw the great body of water which was then call 'South Sea'. It is recorded that Balboa went into the sea up to the mid-leg, with naked sword in hand ... "took possession of it and all the coasts and bays for the crowns of Castile and Leon ..." Balboa was not to enjoy his 'claim to fame' however as his successor in Darien, jealous of Balboa, had him executed on a false charge of treason. The tragic death for this great man came in 1519.

The man who named this great ocean was Ferdinand Magellan who was born in 1480 in Portugal. Magellans navigational skills became well known and he was commissioned (and financed) by King Charles I to command an expedition to sail 'around the world'. He sailed from SanLucas de Barrameda with 5 ships on Sept. 20 1519. In January he discovered the Rio de la Plata - then sailed on south to Patagonia where he put down a mutiny. With three remaining ships he sailed into the Pacific through the "Straits" that are now named for him. The ships set a course westward and sighted land (Guam) after over two months during which they were near starvation. One month later they landed on one of the Philippine Islands where Magellan was killed in a skirmish with natives (April 27th). One ship, the Victoria, under the command of Juan de Cano finally returned to Spain, having sailed completely around the world.

The Pacific Ocean which Balboa first discovered and first crossed by Magellan is the largest body of water on earth. Its area of 70 million square miles takes over one third of the earths total surface - larger than all land masses combined. The equator divides the North from the South Pacific. Average depth of this great ocean is 14,000 feet. Deepest spot being in the "Challenger Deep" which is in the Mariana Trench (SW of Guam) at a measured depth of 36,198 feet.

Many well known navigators followed in Magellan's wake. They included Sir Francis Drake (1543-1596) the first Englishman to sail around the world. The ship he circumnavigated the globe was named "Golden Hind". On his trip he seized a fortune in 'booty' from Spanish settlements along the South American Pacific

Coast. He was Knighted upon return, by Queen Elizabeth I, in 1587 after destroying a large part of the Spanish fleet anchored in Cadiz Harbor.

ABEL JANSZON TASMEN Dutch sailor and South Pacific explorer, sailing from Java in Dutch East India Company's Service (1642-1644) discovered Tasmania and New Zealand (1642) which he thought was a part of Australia; then Tonga and Fiji in 1643.

VITUS JONASSAN BERING, Danish explorer, sailing in the service of Russia probed North through the Bering Sea and discovered Bering Strait (1728) and Alaska (1741). He died of scurvy on Bering Island. The Bering Straits separate North America from Asia and link the Arctic and the Bering Sea. I contains the Diomed Islands and is normally ice-bound from November until June.

LOUIS ANTOINE DE BOUGAINVILLE was the name of the first Frenchman on a voyage around the world. During the years 1766 to 1769 he commanded a ship that discovered Bougainville, Tahiti, Samoa and the New Hebrdes.

JAMES COOK (1728-1779) English navigator and explorer. Led three celebrated expeditions to the Pacific Ocean [1] 1768-71; [2] 1772-75 and [3] 1776-80, during which he charted the coast of New Zealand in 1770 and showed that if there were a great Southern continent it was not as large as commonly believed. He also discovered the Sandwich Islands (Hawaiian Islands) in 1778. He was killed in an attack by Hawaiian natives and burial spot is on the Island of Hawaii.

GEORGE VANCOUVER is another important explorer of the Pacific. He had accompanied Captain Cook on his voyages in 1772-80 and 1791-94, leading an expedition which explored the Pacific and surveyed Vancouver Island and the Straits of Georgia. Cook visited Cook's Inlet in Alaska but failed to find the Northwest Passage which he was seeking.

Others whose names have been recorded in history books of the Pacific during the 16th and 17th centuries include William Dampier, Navigator, Hydrographer, Buccaneer; Admiral Lord Anson who made a trip around the world in 1740; Commodore John Byron; Phillip Carteret; Beauchane Godin; Captain Samuel Wallis; Fredrik Houtman; Garrit de Witt; Pedro Farnandes de Qaeros; Louis-Claude de Freycinet; Andres de Urdaneta and Alvarado de Mandana. Many lost in the mists of time - but all contributed their bit to history and make interesting reading to 'history buffs' interested in the early days of the Pacific Ocean.

Wireless did not appear in the Pacific until the turn of the 19th Century. Since then, much history has been made, both in communications and in the size and kind of ships that later appeared on this great ocean.. It is a story of adventure and gripping interest and much of our national heritage has been shaped by these voyages and events of historical importance in the Pacific.

WIRELESS

This fellow doesn't read QST

Fellow Amateurs

QST is the amateur magazine; the contents are written for us amateurs, by amateurs who know the "Real Dope". QST with its sixty-four pages of radio articles is the only thoroughly amateur wireless magazine. Order today and see.

\$1.00 per year; 10 cents per copy

The QST Publishing Company, Inc.

25 Oakland Terrace, Hartford, Conn.

This fellow reads "QST"

DO NOT ANSWER ... You are already 68 years too late ! This ad is of interest for two reasons. First it was published in the Second issue of Pacific Radio News in 1917. Secondly it was "Wireless Hams" not "Radio Hams" as the heading used by QST indicates. It might also be noted that A.R.R.L does not appear. "The price is right" but you'll have to allow for 68 years of inflation and factor it in. CX.



Names and Calls of Early West Coast Ships

Taken from the Book of our First President published in 1965

MY SAN FRANCISCO STORY OF THE WATERFRONT AND THE WIRELESS

By
Commander Richard Johnstone
U. S. N. R. (Retired)

COPYRIGHT
Richard Johnstone
1965

Herewith follows a list of some 330 Pacific Coast vessels active during the early 1900's. Original two-letter wireless calls are included, as well as the calls assigned in 1910.

- | | |
|---------------------------------|-------------------------------------|
| PACIFIC MAIL SS CO. | S. F. - PORTLAND S. S. CO. |
| SS Acapulco A 2 WWO | SS Rose City H 2 WWR |
| SS Manchuria WVE | SS Bear (W) WWD |
| SS Mongolia WVN | SS Beaver WWB |
| SS Korea WWK | GREAT NORTHERN PAC. CO. |
| SS Siberia WWU | SS Great Northern WIR |
| SS Asia (W) WWT | SS Northern Pacific WIM |
| SS China WWA | CHINA MAIL SS CO. |
| SS City of Sydney WWG | SS Nanking KKEE |
| SS City of Para WWF | SS China WWA |
| SS City of Panama WWP | SS Nile VRE |
| SS Newport WHH | PACIFIC COAST SS CO. |
| SS San Jose WWL | SS Governor (W) .. B2 WGR |
| SS Peru WWJ | SS President G2 WGP |
| SS San Juan (W) WWM | SS City of Puebla .. GQ WGQ |
| SS Pennsylvania WWI | SS Queen GX WGX |
| SS Aztec WWQ | SS Umatilla GU WGU |
| SS Nile (British) VRE | SS State of California(W) WGL |
| SS Persia (British) MBS | SS Spokane WGE |
| SS Ecuador WBN | SS City of Seattle WGA |
| SS Venezuela WBG | SS City of Topeka WGY |
| SS Columbia WBH | SS Curacao WVK |
| S. F. & L. A. SS CO. | SS Congress (F) WGT |
| SS Harvard RH WRH | SS Senator GS WGS |
| SS Yale RY WRY | SS Revalli WGI |
| WHITE FLYER LINE | SS Santa Rosa (W) GL |
| SS Humboldt HX WHX | SS Valencia (W) .. |
| SS Hanalei HN WHN | SS Pomona (W) .. |
| C. P. DOE & CO. | SS Corona (W) .. |
| SS Santa Clara AK WRS | SS Walla Walla (W) .. |
| SS Roanoke S2 WRR | SS Montara .. |
| SS Geo. W. Elder M2 WRT | SS Tampico .. |
| SS F. A. Kilburn WRA | SS Eureka .. |
| CATALINA INTERISLAND CO. | SS Meteor .. |
| SS Hermosa BP WBP | W. R. GRACE & CO. |
| SS Cabrillo BS WBV | SS Santa Cruz WBD |
| SS Avalon WPH | SS Colusa WIN |
| LIEBES FUR COMPANY | CC Cacique WBE |
| SS Carolyn Francis KFHO | SS Santa Inez WSI |
| THE ADMIRAL LINE | SS Santa Rita WBR |
| (ALEXANDER LINE) | SS Santa Alicia *WSJ |
| SS H. F. Alexander KDYK | SS Santa Flavia KRUI |
| SS Ruth Alexander (T) WDR | SUDDEN & CHRISTENSON CO. |
| SS Emma Alexander WGCN | SS Catherine G. Sudden KFKR |
| SS Dorothy Alexander *WGP | SS Edna *WSJ |
| SS Admiral Dewey UD WAY | SS Admiralen (Nor.) LDU |
| SS Admiral Schley UG WAZ | MATSON NAVIGATION CO. |
| SS Admiral Watson P8 WAW | SS Hilonian P 2 WMM |
| SS Ad'ml. Farragut UF WAF | SS Enterprise P 1 WMN |
| SS Ad'ml. Sampson (W) AS WAS | SS Hyades IAC WMK |
| SS Admiral Evans KICZ | SS Lurline U 2 WML |
| SS Admiral Goodrich *WRJ | SS Wilhelmina (T) WMO |
| SS Admiral Sebree WAG | SS Manoa WMQ |
| SS Admiral Rodman WOA | SS Matsonia WMP |
| SS Ad'ml. Wainwright WSF | SS Maui WMR |
| SS Admiral Mayo WZIO | SS Malolo WMCE |
| SS Admiral Fiske *WGS | SS Lurline KIEK |
| SS Ad'ml. Nicholson KMAA | SS Mariposa WGEN |
| ALASKA SS CO. (Seattle) | SS Monterey WHEX |
| SS Northwestern AN WAN | SS Manukai KDSF |
| SS Alameda HD WAA | SS Manulani KDRQ |
| SS Victoria AD WAD | SS Makena WMAI |
| SS Jefferson HM WAJ | SS Makaweli WMAO |
| SS Cordova WAR | SS Mauna Ala WQEU |
| SS Windber WND | SS Mahukona KENM |
| SS Latouche WAI | OCEANIC SS CO. |
| SS Yucatan AG WMY | SS Alameda HD WHD |
| SS Juneau WAM | SS Mariposa HK WHK |
| SS Rajah WAO | SS Sierra HJ WHJ |
| SS Seward WAV | SS Sonoma HM WHM |
| SS Santa Ana WAL | SS Ventura HL WHL |

- AMERICAN-HAWAIIAN SS CO.**
- | |
|----------------------------|
| SS Floridian WLR |
| SS Georgian WKG |
| SS Honolulu WKH |
| SS Isthmian WKI |
| SS Iowan (W) WKJ |
| SS Nevadan WKW |
| SS Ohan (W) WKQ |
| SS Alaskan WKA |
| SS Kentuckian WKE |
| SS Arizonian WKB |
| SS Kansan WKK |
| SS Californian WKC |
| SS Mexican WKL |
| SS Dakotan WKD |
| SS Columbian WKS |
| SS Montanan WKN |
| SS Texan WKT |
| SS Hawaiian WKU |
| SS Virginian WKV |
| SS Pennsylvanian WKP |
| SS Panaman WKR |
| SS Oregonian WKO |
| SS Minnesotan WKM |

- Miscellaneous Vessels of Various SS Companies.**
- | |
|-------------------------------|
| SS Cuba (1) *WQU |
| SS Sachem (2) *WQU |
| SS Pomona KDAT |
| SS Las Vegas KUQM |
| SS Rotarian KDCF |
| SS Oakland KMOO |
| SS Steel Age KOXZ |
| SS West Notus KDAM |
| SS Viking KDYC |
| SS West Hardaway KEDX |
| SS Kansas City WWS |
| SS St. Croix CX WWZ |
| SS Breakwater BK WBK |
| SS Alliance BW WRV |
| SS Providencia WIK |
| SS Camino WQC |
| SS Jacox KEML |
| SS Iris WOJ |
| SS Restorer WIU |
| SS Faith KJOA |
| SS Republic WSU |
| MS Nuuanu WWT |
| SS Costa Rica WQI |
| SS Mexico XBB |
| SS Coahuila XBH |
| SS Corrigan 3rd XBF |
| SS Mackinaw HW WHW |
| SS Leelanaw NL WNL |
| SS Lyra NY WNY |
| SS Pleiades NP WNP |
| SS Dakota MD WMD |
| SS Minnesota MI WMI |
| SS Finland KSF |
| SS Kroonland KSH |
| SS Calawail KFDT |
| SS City of Honolulu (F) KUSD |
| SS City of Los Angeles KOZC |
| SS Bayou State WEXK |
| SS Ohio (W) AO |
| SS Colon KMX |
| SS Rio de Janeiro (W) .. |
| SS Aorangi .. |
| SS President Hayes KDLB |
| SS Pres. Harrison KDMQ |
| SS Pres. Wilson KDSV |
| SS Pres. Hoover KDMW |
| SS Pres. Coolidge KDMX |
| SS Pres. Roosevelt KDWS |
| SS Pres. Monroe KDAR |
| SS Pres. Taft KDRW |
| SS Pres. Grant KDUT |
| SS Pres. Tyler WSAW |
| SS Pres. Van Buren KDHF |

- ASSOCIATED OIL CO.**
- | |
|---------------------------|
| SS Kewanee KIVC |
| SS Frank H. Buck (W) WTO |
| SS J. A. Chanslor (W) WTK |
| SS Rosecrans (W) BM WTL |
| SS W. S. Porter BD WTM |
| SS W. F. Herrin WTN |

- STANDARD OIL CO.**
- | |
|------------------------------|
| SS Asuncion GM WTX |
| SS Atlas GN WTT |
| Barge 91 GD WTU |
| Barge 93 WTZ |
| Barge 95 WTY |
| SS Capt. A.F. Lucas GB WTV |
| SS Col E. L. Drake P 5 WTS |
| SS D. G. Scofield WRD |
| SS J. A. Moffett WRE |
| SS Charlie Watson KDLA |
| SS El Segundo WTQ |
| SS Richmond WTR |
| SS R. J. Hanna KDRD |
| SS Maverick GH WTW |
| SS S. C. T. DODD KDML |
| SS F. H. HILLMAN KDVK |
| SS H. M. STOREY KDVV |

- SHELL OIL COMPANY**
- | |
|---------------------------|
| SS Pearl Shell WIC |
| SS Gold Shell WIB |
| SS Silver Shell WIA |

- UNION OIL COMPANY**
- | |
|------------------------------|
| SS Lansing WTC |
| SS Lyman Stewart (W) WTL |
| SS Oleum WTD |
| SS Pectan UW MAS |
| SS Roma WTE |
| SS Santa Rita WTG |
| SS Santa Maria WTF |
| SS Whittier WHT |
| SS Washtenaw WTH |
| SS La Placencia KDPX |
| SS Montebello (T) KPIX |
| SS La Brea WON |
| SS Argyll WTB |
| SS Erskine M. Phelps WTA |

- MISCELLANEOUS TANKERS**
- | |
|-----------------------------|
| SS Cuzco IAO LEG |
| SS Maricopa LEE |
| SS Ashtabula GKC |
| SS Ashtabula WEZ |
| SS Bradford KNG |
| SS Caddo KSK |
| SS Astral GS KIQ |
| SS Ardmore KIA |
| SS Eagle KIB |
| SS Acme KIJ |
| SS Standard Arrow KSV |
| SS Broad Arrow KSY |
| SS Sylvan Arrow KSX |
| SS Royal Arrow KSW |
| SS Yankee Arrow KDTG |
| SS India Arrow KDHP |
| SS China Arrow KDGW |
| SS Java Arrow KDHO |
| SS Empire Arrow KDUG |
| SS Levant Arrow KDVD |

- SHIP OWNERS' & MERCHANTS TUGBOAT CO. (Red Stack)**
- | |
|----------------------------|
| Tug Sea Lion KDOJ |
| Tug Sea Ranger KDSQ |
| Tug Sea Monarch KDQU |

- Red Stack Tugs**
- | |
|--------------------------|
| Tug Sea Scout KDSY |
| Tug Sea Rover WRP |

- SEATTLE & COLUMBIA RIVER TUGS**
- | |
|-----------------------|
| Tug Tatoosh WPE |
| Tug Tyee A3 WPC |
| Tug Pioneer WPN |
| Tug Oneonta WPX |
| Tug Wallula WPY |

- JAPANESE SHIPS**
- | |
|------------------------------|
| SS Shinyo Maru JSH |
| SS Chiyo Maru TCY JCY |
| SS Tenyo Maru TTY JTY |
| SS Taiyo Maru JAIIA |
| SS Anyo Maru JAY |
| SS Nippon Maru TNP JNP |
| SS Persia Maru JPP |

- U. S. ARMY TRANSPORTS**
- | | |
|-------------------------|-----------------------|
| USAT Thomas ATU WXM | USAT Dix WXC |
| USAT Sherman ATR WXX | USAT Crook WXB |
| USAT Sheridan ATS WXJ | USAT Buford WXA |
| USAT Logan ATL WXF | USAT Warren WXN |
| USAT Kilpatrick ATK WXD | USAT Sumner WXL |

- TRAINING SHIP - SS California State NIJB**
- U. S. REVENUE CUTTER - USS Bear RCB**

☆ ☆

Of the total ships listed herein, 32 were reported lost.

WRECKED 26
FIRE AT SEA 3
TORPEDOED 3

The list of ships does not include the LUCKENBACH LINE for reason that they were equipped and controlled from the East Coast.

AMERICAN-HAWAIIAN COMPANY ships, with few exceptions at this period, were equipped with German made Telefunken equipment. A Mr. Vogel was Telefunken representative at San Francisco.

AMERICAN PRESIDENT LINE ships, were mostly controlled by their own affiliated wireless company. (Globe Wireless.)

☆ ☆

During the period 1900 to 1906 there were some forty commercial wireless stations located on the Pacific Coast, as follows:

- | |
|--|
| PACIFIC WIRELESS CO., California 3, Washington 2 |
| MASSIE WIRELESS CO., California 1 |
| DE FOREST-UNITED WIRELESS CO., California 9, Oregon 6, Washington 9, Canada 3, Alaska 3, |
| HAWAIIAN MUTUAL TELEGRAPH CO., Hawaii 5. |
| TOTAL 41 Pacific Coast Commercial Stations. |



Wireless Calls of the Pacific Coast

Includes Land Station Calls Prior 1910 Plus Early Ship Calls From Dick Johnstone's Book

Early Calls from "Dick" Johnstone's Book

Continued

It is evident in these early days of wireless, an effort was made to introduce regular wireless service between Pacific Coast cities. Note that stations were located at inland points, such as Pasadena, Sacramento, Roseburg, Oregon, and Olympia, Washington, and others.

PERIOD 1900 to 1906.

PACIFIC WIRELESS COMPANY:

- AVALON - CATALINA Station "A"
- LOS ANGELES Station "G"
- SAN FRANCISCO Station "SF"
- PORT TOWNSEND, WASH., Station "D"
- SEATTLE, WASH., Station "DA"

MASSIE WIRELESS CO.,

- SAN FRANCISCO Station "IAA"

MUTUAL TELEPHONE CO.

- OAHU ISLAND, KAHUKU Station "HU"
- MOLOKAI ISLAND, KAMALO Station "AM"
- HAWAII ISLAND, PUAKO Station "KA"
- MAUI ISLAND, LAHAINA Station "LA"
- KAUI ISLAND, NAWILIWILI Station "NW"

Some of the following stations were erected by the American De Forest Wireless Company and later taken over by the United Wireless Telegraph Company.

PERIOD 1900 - 1906

PERIOD 1911 - 1917

STATION		MARCONI WIRELESS TELEGRAPH CO. Call Letters.	
De FOREST-UNITED WIRELESS CO. Call Letters.			
AVALON	PI	KPI	
LOS ANGELES	PJ	KPJ	
PASADENA	DE		
SANTA BARBARA	DF		
SAN LUIS OBISPO	DN	KDN	
MONTEREY	PQ		
SAN FRANCISCO	PH	KPH	
SACRAMENTO	DG		
EUREKA	PM	KPM	
MARSHFIELD, ORE.	PX	KPX	
WESTPORT, ORE.	PG		
ROSEBURG, ORE.	DO		
SALEM, ORE.	DM		
PORTLAND, ORE.	PE		
ASTORIA, ORE.	PC	KPC	
ABERDEEN, WN.	PF		
GRAY'S HARBOR, WN.	PG		
PORT TOWNSEND, WN.	DS		
EVERETT, WN.	DK		
TACOMA, WN.	PB		
FRIDAY HARBOR, WN.	PD	KPD	
SEATTLE, WN.	PA	KPA	
OLYMPIA, WN.	PY		
BELLINGHAM, WN.	PU		
KATALLA, ALASKA	PN		
CORDOVA, ALA.	PO		
SAFETY HARBOR, ALA.	RA		
VANCOUVER, B. C.	DF		
VICTORIA, B. C.	PR		
NORTH VICTORIA	PW		

☆☆

Thirty of the United Wireless coastal and land stations were operating in 1900-1906. The Marconi Company reduced this number to nine in 1911. In 1964, the Radio Corporation station KPH, with its modern equipment, has no difficulty taking care of any Pacific coast requirement.



Early U.S. Navy Pacific Station Calls

NPA	Cordova, Alaska	NPV	Seward, Alaska
NPB	Sitka, Alaska	NPW	Eureka, California
NPC	Bremerton, Washington	NPX	San Pedro, California
NPD	Tatoosh Island, Washington	NPY	St. George, Alaska
NPE	North Head, Washington	NPZ	Puget Sound, Washington
NPF	Cape Blanco, Oregon		
NPG	Mare Island, California		
NPH	Vladivostok, Siberia (temporary)		
NPI	Ferallon Islands, California		
NPJ	Balboa, Canal Zone		
NPK	Pt. Arguello, California		
NPL	Pt. Loma, California		
NPM	Pearl Harbor, Hawaii		
NPN	Guam		
NPO	Cavite, Philippines		
NPP	Peking, China		
NPQ	St. Paul, Alaska		
NPR	Dutch Harbor, Alaska		
NPS	Kodiak Island, Alaska		
NPT	Olongapo, Philippines		
NPU	Tutuila, Samoa		



British Columbia

Early Wireless
Ed Marriner-W6BLZ

Misc West Coast Stations

- A Avalon, Catalina Island
- EX Los Angeles Examiner Newspaper
- G Pacific Wireless Co. Los Angeles, Ca
- KE St. Helens, Oregon
- KB Spokane, Washington, Carlyle Hotel
- UC Honolulu, T. H.

- SA Nome, Alaska
- SN Cordova, Alaska
- SO Sitka, Alaska

- O-2 Portland, Ore. Continental Wireless
- S-2 Seattle, Wash.
- H-2 Rose City (Ship)

Early Ships

- GM SS Asuncion United Wireless
- RY SS Yale United Wireless
- RH SS Harvard United Wireless

United Wireless Station Calls

- PA Seattle, Wash.
- PB Ketchikan, Alaska.
- PC Astoria, Ore
- Pd Friday Harbor on San Juan Island
- PE Portland, Oregon
- PF Aberdeen, Wash.
- PG Gray's Harbor, Wash
- PH San Francisco on the Palace Hotel
- PI Avalon, Calif.
- PJ San Pedro, Calif.
- PK San Diego, Calif.
- PL
- PM Eureka, Calif.
- PN Katalla, Alaska
- PO Cordova, Alaska.
- PP
- PQ Monterey, Calif
- PR North Vancouver, B. C
- PS Presidio, Calif
- PT Ft. Bragg, Calif
- PU Bellingham, Wash
- PV Kalama, Oregon
- PW Victoria, B. C.
- PV Marshfield, Oregon

Early Wireless Calls Before 1910

Naval Stations - West Coast

- TA Cape Blanco
- TD Tatoosh
- TE North Head, Oregon
- TG Mare Island, Calif
- TH Farrallon Island
- TI Goat Island
- TK Pt. Arguello
- TL Pt. Loma, also TM

NEVADA

Commercial Stations on the West Coast

- (United Wireless Co)
- DA Perry Hotel, Seattle, Wa.
 - DB Tacoma, Wash
 - DE Pasadena, Calif.
 - DF Santa Barbara, Calif
 - DG Sacramento, Calif.
 - DK Everett, Wash.
 - DM Salem, Ore.
 - DN San Luis Obispo, Calif.
 - DO Roseburg, Ore
 - DS Port Townsend, Wash.
 - DU Juneau, Alaska
 - DV Chehalis, Wash. 1909

Federal Telegraph Poulson Arc stations 1913

- POL Central Point, Ore.
- PFW Fort Worth, Tex
- PNU Honolulu, T. H.
- PNX Phoenix, Ariz
- PKC Kansas City, Mo.
- PLA Los Angeles, Calif
- PSC South San Francisco, Calif
- PSD San Diego, Calif
- PSF San Francisco, Calif
- PSN Portland, Ore.
- PSO El Paso, Texas

BY-William A. Breniman

By the year 1912, some of the two letter call letters were still in

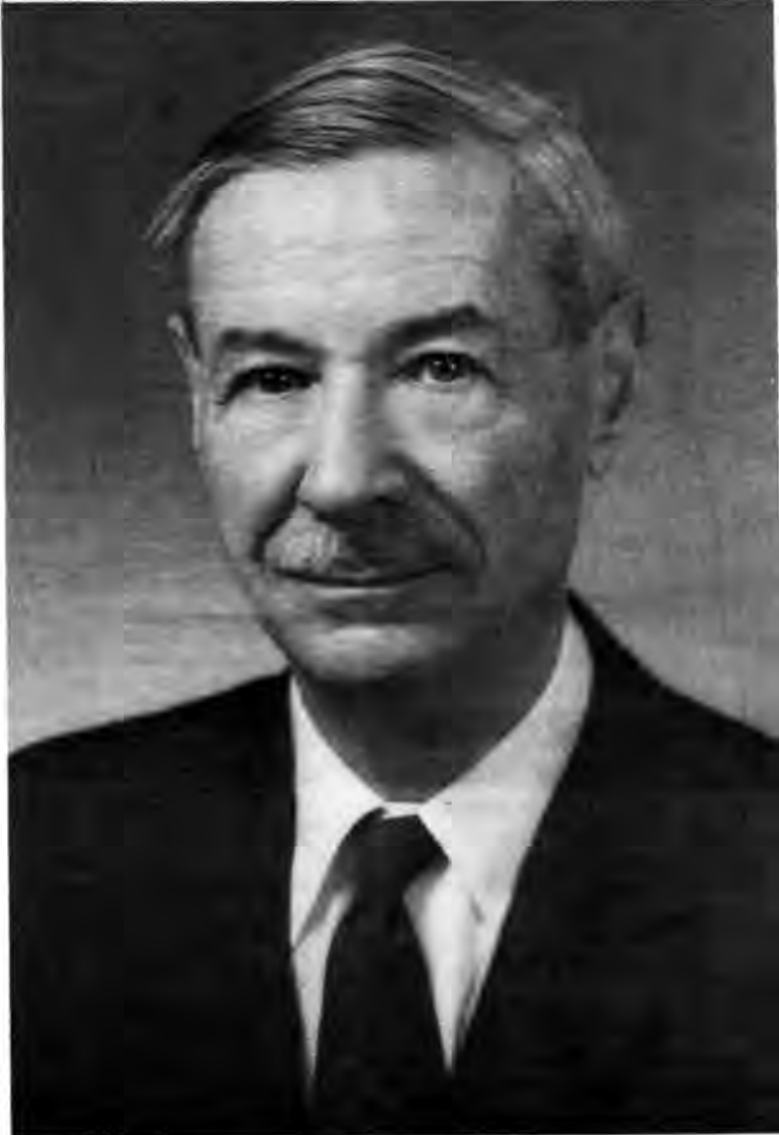
existence and becoming three letter calls, among those: KPA, KPB, KPC RPD, (KPE was assigned to a Port of Seattle station about 1915, and had nothing to do with the United Wireless Co. stations) KPH, KPM and KPJ by now had dropped out of existence.



TALES OF THE WIRELESS PIONEERS

The Story of Haraden Pratt - Pioneer

Early Days on the West Coast as Furnished Henry Dickow



Haraden Pratt Society member [S/SGP-252] was one of the legendary members of early day Wireless and one of the true pioneers of our calling. He received his "Certificate of Skill" in 1911 from R.Y. Cadmus in San Francisco. His first assignment was on the SS Riverside/WRM owned by the Charles R. Nelson Company. He was assigned in 1910 by "LM" (Lawrence Malarin). Later he served aboard the Steamers Falcon, Washtenaw, Pactan, Lucan, Goe. W. Fenwick and the SS Sahta Rosa. Fortunately for him, he was relieved for a trip when the Santa Rosa was lost at Point Arguello on July 7 1911 in which 4 lives were lost. Of more than passing interest was the fact that our late member Charles E. Maass was aboard the Santa Rosa with his mother. He was a boy 6 years of age and it was his first trip. One would think this would discourage a young boy from ever going to sea but not so with Charlie whose career as an operator was quite spectacular. Charlie was founder of our Elmo Pickerill Chapter in the New York-New Jersey area. He became a silent key on Dec.18 1975. Haraden was also assigned to Station "KPH" before he began a career in engineering and management that was to take him to one of the top offices in our country as Telecommunication Advisor to our Presidents. He died on August 18 1969.

Dickow Records the Life History and Experiences of One of our Legendary Pioneer Members for Posterity

The stories told by Haraden Pratt are a resume of the course of wireless history. From his days as an experimenter and amateur operator in 1906, to his appointment as Telecommunications Advisor to Presidents Truman and Eisenhower, his long and colorful career encompasses almost every facet of wireless communication. Only a scant few of the pioneers of the first decade of communication without wires still remain to relate their tales, and Haraden Pratt is one of them. In chronological order, he unfolds the highlights of his life in the paragraphs that follow.

1905

My interest in wireless telegraphy was aroused by a newspaper report that Major Squier of the Signal Corps of the U.S. Army (later the famous General Squier of wired-wireless fame) had conceived the idea of using trees for wireless aerials by driving nails into the roots and trunks and connecting wires to them. His first test would be conducted between Fort Mason in San Francisco and Fort Alcatraz in the Bay. The Signal Corps had just completed an experimental laboratory in the Phelan Building from where the tests were to be controlled. The original circuit between the Forts was established under the direction of Captain Dyer, the actual work being done by Carl Kinsley, a civilian expert attached to the Corps.

Both my father and mother were Morse wire telegraphers; they met over a private telegraph line that ran around the city from the rooftops. They taught me the American Morse Code on a telegraph circuit that interconnected the floors of our home. Together with my interest in Major Squier's experiments, I was able to build my first wireless receiving set from scant bits of literature then available.

1906

I was now ready to receive my first wireless signals, but I lacked the necessary aerial. Fortunately, the telephone line crews were at this same time replacing the galvanized wire circuits on Franklin Street with copper, throwing the old wire into vacant lots. So I had plenty of wire. I made a cage aerial using some old wagon wheels and suspended it between the gables of the housetop.

The coherer detector was by this time going out of style in favor of newer and better microphonic devices. I made my first detector from two pieces of arc-light carbons, each filed to a sharp edge, with a sewing needle placed across them. Plenty of these carbons were available because they were replaced each day in the arc lamps that illuminated the city by night, the old ones being thrown to the ground. I bought a "solid back" telephone receiver from the Manhattan Electric Supply Co. for sixty-four cents. Like Marconi, my first receiver consisted of only a crude detector, a telephone receiver, and an aerial and ground connection.

I listened for signals from Fort Mason; we lived only four blocks away. I heard nothing. In due time I learned that Major Squier's idea did not work.

Then came the catastrophic San Francisco earthquake and fire, and wireless was forgotten by me until 1908. It was during that year, with the "Great White Fleet" of the U.S. Navy at anchor in the Bay, that my thoughts returned to wireless. Some ships of the Fleet had been equipped with both wireless telegraph and telephone apparatus before sailing from the East Coast on an around-the-world good-will cruise. It occurred to me that I might hear signals from these ships. I hurried to the basement, dusted the cobwebs from my 1905 apparatus, adjusted the needle on the carbon detector . . . and, sure enough . . . in came the signals, loud and clear. They were mostly from the flagship Connecticut and the U.S.S. Colorado. Messages were going back and forth between the ships and the U.S. Navy radio station on Yerba Buena Island, conveying invitations to, and acceptances from, the officers for social engagements ashore. The Navy used the Continental Code, which I did not know, but with a copy of it taken from a library book, I was able to translate the messages.

Lee deForest had sold the Navy a number of wireless telephone equipments, using small arc generators, and some of these sets were installed in the ships by deForest himself at Norfolk, Virginia.

Chief Electrician Meneratti used the set on his ship to send music for the entertainment of his friends on other ships, by placing the microphone in front of a phonograph. I could hear the music occasionally, but both the transmissions and reception were erratic. Chief Electrician aboard the Connecticut was Arthur Rice, who later served as Radio Aide at the Mare Island Navy Yard while I too was there.

By this time I had become a confirmed wireless "bug," and it was not long before I had a completely new and modern wireless outfit with transmitter, and a mast 110 feet high to support my aerial. I was now able to talk to amateurs from Seattle to Los Angeles, and with ships at sea as far as 1600 miles away. At times I was even able to hear the new station at Kahuku in the Hawaiian Islands built by Arthur Isbell in 1908, as well as the Navy Station at Key West, Florida, and ships of the United Fruit Company in the Gulf of Mexico. The American Morse code was used exclusively in those days by United Fruit and by all stations in the Puget Sound area.

1908 also saw the formation of one of the world's first amateur wireless clubs - The Bay Counties Wireless Telegraph Association, one of whose founders was Frank Rieber of Berkeley. I became a charter member. Many other old-timers belonged to it: Eddie Foy of Berkeley, Cyril Lotz of San Jose, Lewis Clement of Oakland, Drummond Browning of Hayward, Gilbert Cattell of San Francisco, and Ellery Stone of Oakland, to name a few. The organization remained active until the Radio Act of 1912 prohibited the amateurs from operating on wave-lengths above 200 meters.

Two very prominent operators were on the air when I began my first transmissions in 1908. One was Ralph Wiley, Chief Electrician for the City and County of San Francisco, and the inventor of the first street traffic signals known as "Bird Cages" - and George Kellogg, who was in charge of the fire alarm control station in Jefferson Square. They communicated with one another daily, giving me a lot of code practice.

Early wireless amateurs had many and varied experiences. The Pacific Gas & Electric Company refused to supply electricity to houses in which wireless transmitters were located. The reason was obvious: In those days of combination gas and electric light fixtures, an insulated joint was inserted in the gas pipe which supplied the house. While this precautionary measure served its purpose of preventing electrical discharges in the gas line, it nevertheless caused the metal pipe to act as a wireless antenna. The spark from the wireless transmitter would jump across the insulated joint, thus causing the gas to explode. A San Francisco amateur named Bill Larzelere found to his dismay that his transmitter had caused a spark to jump across the insulated joint in the house next door, blowing out the front wall. There had been a slow gas leak in the basement room where the meter was located.

Another nuisance created by the early experimenters was the blinking of electric lights in houses nearby. Spark coils were often replaced by heavy-duty, high-voltage transformers which placed an undue load on the power line, and each time the wireless telegraph key was closed the lights would dim. To correct this annoyance, it was necessary that a much larger power transformer be installed on a nearby pole by the public utility serving the area. I once corrected this shortcoming by using a series transformer that supplied just the right amount of voltage on the line to compensate for the drop.

One morning, while maintaining my usual 7 a.m. wireless schedule with other amateurs, I saw wisps of smoke emanating from the power transformer on the pole. I reported my findings immediately to the utility people, informing them that a transformer in my neighborhood had become defective. Returning home that afternoon from school, I found a brand new 10-kw transformer installed in its place - and my light-blinking troubles came to an end. But this was not the only problem of the wireless experimenter. Sparks from his transmitter caused considerable damage to electric light fixtures in houses over a widely scattered area. During one of my morning operations I burned out fourteen light fixtures in an apartment house in the next block.

Additional complaints came from telephone users who found that they could not use their instruments while amateur wireless telegraphy was in progress in the neighborhood. The noises created in the telephone were terrific. An amateur named Sydney Fass who lived on Green Street, four blocks away, could not use his telephone while I was transmitting. Little sparks flashed across the carbon elements of the lightning arrester. I told him to remove the carbons, and his problem was solved. Another amateur named Cummings who lived on Steiner Street created such great disturbance in the telephone circuit that the telephone company installed a group of closed wire loops on poles throughout the immediate area, without success. It became necessary to remove all of the carbons from the lightning arresters throughout the locality. The telephone company threatened Cummings with suit, but after he consulted his own attorney the matter was dropped.

On another occasion, one winter evening, a storm blew one of my antenna wires across a 13,500-volt power line on Chestnut Street, burning through all six cables with accompanying lightning-like flashes. This loss of power shut down the Fillmore Street trolley line temporarily. I quickly cleared away my broken wire before the repair crews arrived.

Station "PH" on Russian Hill

It was the ambition of every young wireless enthusiast to visit the PH station on Russian Hill while it was in operation. Eddy Foy was on duty when I dropped in. The station's transformer

was an old open-core American deForest Wireless Telegraph Company type which was housed in a large mahogany box. The big spark gap was in another enclosure, doubly lined with asbestos to deaden the sound. To view the spark, two massive inner and outer doors had to be opened. The resounding crash of the spark was so great that it could be heard blocks away. Irate neighbors would shout from their windows, demanding that Foy discontinue the racket.

So many complaints were filed against the station that the Board of Education eventually refused to renew the lease on the land on which it stood. Under the direction of Arthur A. Isbell, the new company manager, the station was re-located on a hill in Daly City, just across the county line. Thereafter it became known as The Hillcrest Station.

Another new station was also established on top of the Chronicle Building at Third and Market Streets in downtown San Francisco, with the call-letters CH. Traffic was handled by this station while PH was being re-located.

One of the night operators at CH was A.Y. Tuel, a former railroad telegrapher whose wireless career began in Astoria, Oregon at a station built there by Robert Marriott. Another of the original CH operators was "Pop" Hyde, one of the very first of the land-line telegraphers to be converted to wireless.

At the original PH station on Russian Hill, one of its operators was Lawrence A. Malarin, also a one-time wire telegrapher. Malarin used vile language on the air. In the early days there was no law against cursing and swearing, and much of the language heard over the air waves was not of the parlor-type variety.

On complaint of the Toyo Kisen Kaisha Steamship Line, and the Commandant of the Mare Island Navy Yard, Malarin was relieved of duty by manager George Jessop of the United Company, and transferred to the head office, where he gave vent to his invectives among the operators he engaged for ship and shore station duty.

He was especially intolerant of the Japanese ship operators who served in the vessels of Nippon on the run between San Francisco and the Orient. These operators had a particularly difficult assignment, in that they were required to read, write, speak, and communicate by wireless in two distinct languages. They often conversed in English with great difficulty. To compound these problems, they had to use both the Continental Code and one of their own, which consisted of fifty different characters. All Japanese immigrant-carrying ships entering San Francisco Bay were wireless equipped, and they exchanged an unusually heavy volume of traffic with the shore stations.

Malarin's fiery Latin temperament was not compatible with that of the Japanese, and he berated them with fury each time a request was made to repeat a message, or certain parts of it. The Japanese operators had strong likes and dislikes for those with whom they came in wireless contact. Only a man of calm and strong will could long endure the task of handling a string of wireless messages from an incoming Japanese ship. Often a word or two, and sometimes an entire message, had to be repeated as many as three or four times before it was acknowledged. Small wonder that only a few of the sparse group of wireless operators then available was assigned to duty at station PH. Fortunately, I became one of them. (Continued on Page 8)



S.S. Santa Rosa [Call "GL"] shipwrecked off Point Arguello on August 7th 1911.. Most of the passengers were carried ashore in a cargo net which was pulled by those ashore. The ship was a total loss. Four died during the crash or were drowned. The SS. Santa Rosa was 27 years old when wrecked. She had been built at Chester, Pa., in 1884 for service on the West Coast of the U.S. She was 326 feet long and originally a 'two-stacker'. One of the funnels was removed in 1904 during a major overhaul. She was a shallow-draft vessel built for the bar at San Pedro. Photo furnished by Charlie Maass.

When PH took to the air at Hillcrest, a gentleman's agreement was in force between the various wireless operating companies and the U.S. Navy. The first half of each hour was reserved for Navy traffic, the second half for the commercial stations. Thus the operators had time to "clear the meat hook" of message traffic which went out from the station over a Western Union Wire, and to do other chores as the demand required. When traffic volume was low, the operators took to reading dime novels.

During one of these quiet periods, the station building at PH trembled violently from the impact of heavy objects falling on the roof. A wireless strike was in progress. The year was 1912. I reached for my revolver and rushed outside to determine the nature of the disturbance. I saw nothing, and returned to my post. Then the bombardment came again, more violent than before. I again rushed outdoors with my revolver, and headed for the privy. Someone must be hiding inside, I reasoned. I shouted that I would put a bullet through its walls, and then I fired one shot into the air. Out came the culprit, my amateur wireless friend, Bill Larzelere, who had been throwing large boulders on the roof of the station building from a vantage point on the hill.

The Carborundum Detector

The rules of the United Wireless Telegraph Company strictly prohibited the use by its operators of any form of crystal detector other than the carborundum type. This relatively inferior instrument was invented by the company's vice-president, General Dunwoody, after United's predecessor - deForest Wireless Telegraph Company - had lost the famous patent suit covering the electrolytic detector in 1906. The suit had been in the courts for about three years, and the adverse decision resulted in the discharge of both, Dr. Lee deForest and president Abe White from their own company. White was replaced by Christopher Columbus Wilson, who died in the Atlanta penitentiary after being convicted of fraudulent use of the mails.

While employed as an operator at station PH, I always used a crystal detector of my own to replace the inferior carborundum device. Silicon and galena were far more sensitive and effective. Being in direct violation of company rules, this action prompted me to make certain that my own detector had first been removed from the wireless operating table at the end of each tour of duty. But on one occasion I neglected to do this. My cardinal sin was immediately reported to Lawrence Malarin, the Chief Operator in the head office, by George Baxter, who was in charge of station PH. I was roundly censured by Malarin for this grievous infraction of company rules. He threatened to fire me, stating that my action could bring on a patent suit. Thereafter I kept my choice private crystals in my pocket.

The clandestine use of one's own crystals in stations aboard ship and on shore was widespread. Traffic would have suffered severely had the company rule been observed. So inefficient was the carborundum crystal that it was grudgingly referred to as coal.

Coastwise Wireless

An ambitious plan of expansion was undertaken by United Wireless in 1908, with the construction of a station at Friday Harbor on Puget Sound. It was the first of a coastwise chain. Friday Harbor was so successful that nightly communication was conducted with another United station at Monterey, California, a record of no mean accomplishment in those days.

Other stations were built in quick succession at San Diego, Los Angeles, San Luis Obispo, Fort Bragg, Eureka, Portland, and Seattle for point-to-point service. In 1910, this type of service was discontinued in favor of shore-to-ship communication only.

Competition was keen in the first years of wireless. United, deForest, Massie, Pacific, and a few lesser lights all strove for a position of dominance in the new field of communication. Marconi had not yet come to the Pacific Coast, content with his eastern conquests. Eventually the several companies were merged or consolidated, with Marconi in the van.

The powerful pioneer Massie wireless station SF in San Francisco was short-lived. An inspiring landmark near the ocean beach, its two masts reached 190 feet into the sky. The station's first operator was W.S. Smith who came from Point Judith, Rhode Island, to take charge. While working the S.S. Lurline of the Matson Navigation Company during a lightning storm - rare in San Francisco - he suffered severe burns on his right arm. A report of his misfortune appeared in the daily press.

Massie sold out to Marconi in 1912, receiving only \$5000 for all of its Pacific Coast properties, including thirteen shipboard installations. Mr. Massie accepted the loss personally, having steadfastly refused from the beginning to sell stock to finance the activities of his company.

Wireless Telephony in the Bay Area

Some of America's first experiments in wireless telephony were conducted in San Francisco. Participants were the McCarty Brothers, Poulsen, and H.D. Dwyer who cluttered the air with primitive rigs using induction coils and small arc generators. Most were stock-selling ventures.

McCarty and Poulsen operated from locations near and along the ocean beach, while Dwyer set up his transmitter in an old warehouse on the northeast corner of Fillmore and North Point Streets. I could hear the Dwyer signals clearly in my home about eight blocks away. When I told Dwyer how well I had been receiving his voice, he persuaded me to allow prospective buyers of his stock to visit my home and listen to the demonstrations. This practice continued until it grew into a nuisance, with orders from my mother that I cease and desist.

Dwyer would not allow anyone to inspect his equipment. He kept it covered with a large black cloth. Later, he and his associates installed a wireless telephone station on the Fairmont Hotel and another in Frutivale, across the Bay. Communication was carried on with the utmost difficulty - unreliable and erratic. The company went out of business soon thereafter, but not before an abortive attempt was made to talk by wireless telephone from the ground to an airplane in flight during an Oakland Air meet.

First Sea Voyage

I graduated from high school in December 1909, and applied to Lawrence Malarin for a job aboard ship as wireless operator. He assigned me to the S.S. Riverside, bound for Puget Sound.

Accommodations on the ship were at a premium. There were two berths in the wireless room, the upper one being assigned to company "dead-heads" who traveled between various ports. On my first trip to sea my roommate was a man who spent most of his time at the ship's rail, jettisoning the contents of his stomach with anguished groans. He was a poor sailor.

The ozone generated by the spark-gap of the wireless transmitter added to his physical discomfort, and the poor fellow would lean over the edge of his bunk imploring me to discontinue my operations. Only those who have suffered seasickness can share his plight.

My next ship was the S.S. Falcon, Captain Dahlquist. He was a skilled navigator, remaining awake all night for fear his mates might run the ship aground. One night the exhausted Captain fell asleep in a wicker chair in his cabin off the bridge and the mate ran the ship ashore on Blunt's Reef. It was a clear morning, with the Blunt's Reef Lightship plainly in view. The Falcon was a total loss.

Malarin then assigned me to the Union Oil tanker Washtenaw, whose Captain had an almost unlimited capacity for grog. After pumping cargo ashore at Portland we were ready to sail at midnight. But the Captain was nowhere in sight. Finally the first mate located him in one of his favorite drinking holes. He was so intoxicated that it required five men to carry him aboard and deposit him in his bunk.

He was an ornery cuss. He sent for me one morning about six o'clock. I hurriedly donned my bathrobe and made for his cabin. He berated me for appearing before him improperly dressed. The next time he sent for me I took adequate time to dress fully . . . and he criticized me for my delay in appearing before him.

He met his Waterloo when he ran into Schmidt's Pier in Seattle, knocking down a half of it.

Then I was transferred to the Union Oil tanker Pectan, then the world's largest oil carrier. She flew the British flag. Her call letters were UW, later changed to MAS. She was named after a sea shell, like others of the Dutch Shell Oil Company of which she was once a part. We carried crude oil to Chile, and we discharged our cargo at Antofagasta and Taltal.

Jim Watkins partially installed the wireless set on the Pectan at the Union Iron Works in San Francisco, and I was required to complete the installation at sea.

In Taltal, I boarded a German freighter, the S.S. Holger of the Cosmos Line, to meet her wireless operator. He was a factory engineer sent from the Telefunken plant in Germany to demonstrate a new model wireless set to South American governments. The original equipment, when removed, was rebuilt in Germany and sold in the United States - some of it to the U.S. Navy.

The Holger's installation was truly new and modern, with corona shields on the antenna wire, a new type spark discharger known as a quenched gap, a sharply tuned receiver with coils of litzendraht wire, and an electrolytic detector. It was the best that the year 1912 could offer.

Haraden Pratt Story - Dickow

The operator took me to the cabin where beer, pretzels, coffee and cake were served in the German tradition. Every evening he would handle messages with a station across the Andes at Bahia in the Argentine, where there was a cable connection with Hamburg. I could never hear the Bahia signals on the Pectan, even with my best detector crystals, but on the Holger the signals were distinct and clear. I had a United Wireless Type-D tuner at my disposal which, because of shortcomings, we scornfully called a "detuner."

On her return trip to San Francisco the Pectan developed engine trouble and the Captain wirelessed the head office for a tow into San Diego Bay. But we received a message instruction to proceed to San Francisco instead. The Captain was highly displeased. He was no longer "monarch of all he surveyed," now that he was at the mercy of his wireless operator. For this reason, the wireless operator aboard ship and his noisy contraption were the bane of Captains everywhere.

I helped to restore a measure of respect for the wireless on the Pectan when I reported the Jeffries-Johnson fight at Reno, blow-by-blow, sent to us by the United Wireless station at San Luis Obispo.

Among my other assignments was the Santa Rosa, in 1911. I took leave of the ship to enjoy a short vacation when disaster struck her. The Point Arguello light was used as a beacon by navigators to set the course of the vessel in the dangerous surrounding waters. But the officer on the bridge had mistaken the headlight of a nearby railroad locomotive for the light at Point Arguello - and he ran the ship aground on a sandbar. When the tide went out she broke in half. Her boilers were plainly visible on the beach for years thereafter.

While on the Santa Rosa I learned that deForest had installed a station in the Phelan Building in San Francisco, and another on the Securities and Savings Bank Building in Los Angeles. I went ashore to visit these stations but found the one in the Phelan Building locked with a sheriff's attachment on the door. Later I found a similar situation in Los Angeles.

Dr. deForest had equipped his stations with a new and modern type of 500-cycle quenched-gap spark transmitter which emitted a pleasing and easily readable note in the 2,000-meter band. But he had no facilities for collecting and delivering messages, and was consequently unable to carry on successfully. It was but one of his many failures. The Federal Telegraph Company bought his equipment at a sheriff's sale - and in 1912, I, in turn, purchased some of it from Federal's Chief Engineer, Cyril Elwell, for the laboratory at the university.

My First License

On my return to San Francisco in June, 1911, I was told by Lawrence Malarin that it would be necessary for me to secure a Federal Government wireless license. The Ship Act of 1911 had come into force. I could take my examination either at the Mare Island Navy Yard or at the office of the new Department of Commerce Radio Inspector, R.Y. Cadmus, in the San Francisco Custom House.

Knowing that I could telegraph, Cadmus asked me but one technical question: "If, during a sea emergency, all my Leyden Jars (condensers) became broken, how would I transmit a wireless message?" I answered: "Put some bottles in a tub, put sea water in the tub, and in the bottles, put wires or chains down the bottles, and connect them all together."

"Right answer," said Cadmus, and he gave me the cherished license, then called a Certificate of Skill. We became fast friends.

When the new Radio Act of 1912 came into force, Bill Larzelere and I were anxious to hold the first two duly-issued licenses. Cadmus gave us the examination questions and told us to write our answers at home; he had been called to Los Angeles on business. We gave him the papers on his return. Some days later he told us that he had been unable to look at them but gave them to his wife to examine. She gave us both a rating of 100 per cent. We got the licenses.

Cadmus was transferred to Baltimore and Robert B. Wooverton became Inspector after the post had been filled for a short period by Inspector Thompson.

My College Thesis

During my last years at Berkeley, several of my classmates and I built a radio laboratory in the Engineering Building on the campus for our thesis.

The new 300-ft. Campanile Tower was under construction and I made plans to string a wire from its top to the chimney of the Mechanics Building nearby. Permission was refused. But I

erected it nevertheless. I made friends with the watchman . . . and I did the work under cover of a rainy Saturday afternoon when no construction was in progress.

My electrical engineering professor, H.F. Fischer, had goaded me by charging that I lacked resourcefulness, and I met the challenge by erecting the aerial. The wire was suspended so high that it could not be seen from the ground. With this fine antenna we could pick up the big 500-cycle Telefunken stations on the German Islands of Yap and Nauru, 6100 and 5100 miles away respectively. A German company was engaged in mining phosphates on Nauru and kept in touch with Hamburg by cable via Yap. These stations were destroyed by the Japanese on the outbreak of war in 1914.

At the university, I also took courses in astronomy as a diversion. I was asked by the astronomy department if signals from the Navy station at Arlington, Virginia, could be received. At that time a project was under way to exchange radio signals between Washington and Paris, to obtain a more accurate figure for the difference in longitude between the two cities. We were able to receive the signals without difficulty, piping them to the astronomy department building where connections were made to a chronograph and the local sidereal clock. After months of observations, a substantial correction in longitude difference was secured between Washington and Berkeley, California.

I Become an Engineer

Upon my graduation from college in May, 1914, I was appointed assistant engineer at the 300-kilowatt trans-Pacific Marconi spark station at Bolinas, with its receiving station at Marshall on Tomales Bay some forty miles up the coast from San Francisco. My classmate, Lewis Clement, was given a similar assignment in Honolulu where another link in the Marconi circuit to Japan was in course of construction. We were indebted to Mr. A.H. Ginman for these assignments. No radio equipment had as yet been installed.

Radio construction began after the general contractor, J. G. White Engineering Corporation, had completed its part of the project.

My boss, Adolph Rau, took leave to marry the telephone operator in the San Francisco Marconi office, and then left on a three-week honeymoon. When he returned to Bolinas we were already testing with Honolulu.

My assignment at Bolinas was not an easy one. Blueprints were often missing, some were wrong, and some equipment failed to arrive. To make matters worse, my only technical assistant electrocuted himself.

At this high-power Marconi station, some 2,000 amperes of current flowed in the local oscillatory circuit through bus-bars which were twenty-four inches wide. When the power was first turned on for the initial test, the building filled with smoke from burning paint on the beautiful steel and iron bus-bar supports, which became excessively hot. Entirely new supports of bronze had to be made in San Francisco to replace the iron and steel.

At the inauguration of service, Mr. Ginman escorted a busload of prominent San Franciscans, including Mayor James Rolph, to Bolinas. While they were looking at the oil-filled entrance insulator for the antenna feeder, it exploded. Fortunately the oil spray did not reach the place where the visitors were standing. It took some time for a crew to chop a hole in the concrete wall to clear the antenna feeder.

Bolinas is only a short distance from Point Reyes, the graveyard of many fishing boats and larger craft which grounded on its reefs and were then demolished by the turbulent waters. While employed at Bolinas and playing tennis with George Baxter before lunch on a Saturday in November, 1914, a tragedy unfolded before our eyes.



HARADEN PRATT STORY—DICKOW

The Wreck of the SS Hanalei A Tale

We heard the whistle blast of a steamboat nearby, but the fog-shrouded ocean made it impossible for us to see anything at a distance of more than a few hundred feet. We ventured down the cliff and made for the beach to determine the source of the whistle we had heard.

In the distance we could faintly see the outline of a ship. She had run upon one of the reefs that fringe the coast between Point Reyes and Point Bonita, an area known to mariners as the "Potato Patch."

Soon the fog lifted a bit. A self-righting, self-bailing boat with three men aboard came from the Pt. Lobos life-saving station, in answer to a distress call sent from the ship whose whistle we heard. The men in the boat were unable to get close to the stranded ship and it overturned in the churning waters.

The ship in distress was the lumber schooner Hanalei, equipped with a United Wireless installation and operated by Marconi with two wireless men. The senior operator was Adolph J. Svensen, the junior operator Loren A. Lovejoy.

The Hanalei launched a lifeboat, which was quickly dashed to bits on the reef. Then a second boat was launched, but it too failed to survive. Two sailors were drowned in the effort. An attempt was made to fire a mortar shell ashore, but it fell short of its mark. The mate then loaded the gun with a double charge of powder for the next shot; the gun was torn from its lashings and struck the officer in the chest.

Our chief rigger, George Hanson, established anchorages on the cliff and prepared to rig-up a breeches buoy in the event that a line might be run from ship to shore. About sundown a young man named Schwerin volunteered to swim ashore from the Hanalei with a line, but it became untied, and when he reached the shore it was gone. At dusk, our men found a corpse in the surf and carried the blue body to one of the fires that had been started along the beach to aid in rescue operations. Soon the corpse moved its eyes and we took it to the kitchen of the hotel where the wireless operators lived at Point Reyes. We revived the man. He was Captain Clark, one of those who failed to get safely back into the surf boat when it overturned. He was caught in a rip tide and swam all afternoon before landing on the beach, where he fell into unconsciousness.



"THE CAPTAIN HAS REQUESTED THAT YOU GIVE HIM A FEW MINUTES ADVANCE WARNING SHOULD YOU WISH TO LEAVE YOUR POST DURING THE STORM."

Meanwhile a group of reporters from the San Francisco Examiner arrived. Finding that nothing much was being done to rescue those aboard the Hanalei, they called their office to request help. On telephoning the Golden Gate Life Saving Station the Examiner was told that no personnel could be dispatched to Point Reyes because there were no funds available for travel. The Examiner then hired a truck at its own expense and dispatched it with a crew of rescuers which arrived on the scene at about one o'clock in the morning.

The life-saving crew eventually managed to get two lines aboard the stricken Hanalei, one fore and one aft, while the ship was rapidly breaking up. Her cargo of railroad ties, her wooden doors and furnishings were all washed ashore. Eighty-three persons aboard were huddled on the ship's bridge and in the pilot house as she began breaking up.

The wireless shack was put out of commission soon after Svensen sent out his first distress call. Lovejoy, the other operator, then climbed the rigging to the mast-top where, with flashlight in hand, he calmly began communicating with those on shore.

About two o'clock the ship broke up. We could hear the wails of the people aboard. Then the wireless operator's flashlight signals were seen again. He was communicating from a piece of wreckage to which he was clinging, telling us that the water was covered with fuel oil and that some people were being suffocated by it.

The next morning, when all was over and the Hanalei no more, 23 out of 83 persons aboard were gone. Among the dead was wireless operator Svensen. Captain Carey was saved, as was his first mate. Following an investigation into the cause of the disaster, the Captain's license was suspended for one year. Later he served as master of a Dollar Line vessel which stood by the S.S. Vestris when she was in distress off the New Jersey coast.

Following the wreck of the Hanalei a life-saving station was established at Bolinas, but it has long been discontinued. In memory of the disaster, I penned the following verse:

A TALE

It is a tale by all asserted,
Near Bolinas by the sea,
Upon the rocks that shoreward skirted
Was piled the steamship Hanalei.
At noontide on a day of mist,
From her course far led astray,
She quietly settled with a heavy list,
Unsheltered either from sea or spray.

Now all that remains of the little ship
Are some sticks and timbers on the sands,
Tossed hither and thither by the grip
Of the swells beneath where Marconi stands.

Sydney Maddams

Station PH was built by Sydney Maddams who, with Tim Furlong, was also one of its original operators. Maddams learned telegraphy at the Government Telegraph School in London before the turn of the century. He became a telegrapher in the Central Telegraph Office along with 3,000 other male operators who manned the provincial circuits, and 2,000 female operators who handled the Metropolitan London wires.

While Maddams was learning his trade as a telegrapher, Marconi was experimenting with his wireless telegraph in England. Marconi did not know the Morse telegraph code and it became necessary for the government to supply him with operators.

Maddams was the operator who sent the now-famous letter S across the Atlantic from the Poldhu station in England to St. Johns in Newfoundland, at fifteen minute intervals. He recalls the great enthusiasm exhibited by Marconi on his return from America, when he displayed his gratitude by slapping the operators on the back and jumping up and down like a little boy.

Maddams was given employment by United Wireless Telegraph Co. on his arrival in the United States, and by May 16, 1908, he was at the key of station PH. On one occasion he heard music - The Merry Widow Waltz - and then a voice asking if anyone had heard it. Replying by wireless telegraphy Maddams said: "Yes, I heard it, very loud and clear. What is it? Please come back by voice."

The answer came . . . it was the little wireless telephone on the battleship Connecticut of The Great White Fleet, Maddams telephoned the San Francisco Examiner and asked that a reporter be sent to the station to listen to the voice signals. The story was printed in the paper and Maddams was paid \$10 for it.

He was later sent to sea as wireless operator on the SS Hilonian, then to the new station at Kahuku, Oahu, built by Arthur A. Isbell. Maddams gave the station its call-letters, HU.

In 1912, the Federal Telegraph Company sent its president, Beach Thompson, accompanied by A. Y. Tuel, to Honolulu to establish a station of its own at Heeia Point. Maddams was employed as station manager and retired from Mackay Radio and Telegraph Co. in 1945. He died in Honolulu in 1966.

AT THE MARE ISLAND NAVY YARD

In February, 1915, I was given employment by George Hanscom at the Mare Island Navy Yard as machinist at \$4.32 per day. Later I was appointed an Expert Radio Aide.

I also took the examination in San Francisco for a position as Engineer-at-Large, the tests consuming three full days. I passed as number 9 out of 39 applicants, and I was offered an

engineering assignment with the Reclamation Service at \$100 per month. I declined the offer because I was then earning a higher salary at the Navy Yard. This examination also qualified me to take the test for 2nd Lieutenant in the Army Engineer Corps. It was rumored that the examination was made so difficult that none could pass it, leaving the Corps free to select only those who were acceptable to the army brass. At the outbreak of World War One, the Corps offered me several inducements ending with an appointment as Lieut.-Colonel without examination, provided that I passed the physical test. But I decided against a military career.

My duties at Mare Island consisted of running the laboratory, designing apparatus of many types, and fitting-out shore stations. Later I installed a lot of special equipment on ships, including direction-finders on the four-stack cruisers. I was also the inspector of Federal Arc equipment for a new 200-kilowatt station under construction at San Diego.

Finally I was placed in charge of technical aspects of privately owned stations which were commandeered by the Navy on the outbreak of war. The Bolinas 300-kilowatt "rock crusher" came under my jurisdiction. We soon shut down this station because of the terrific interference it created.

One day the Commandant at Mare Island requested me to visit the head of Naval Intelligence, Commander Van Antwerp, in San Francisco. The Commander had been asked to verify a report that a powerful radio station was transmitting in the German language, somewhere in Mexico. Could I help? he asked. Yes, I could.

With the assistance of a group of his officers, I constructed four direction-finding receiving sets in the Mare Island shop and installed them in various strategic locations . . . one at Point Loma near San Diego, where Ellery Stone was in charge; one on a bean farm where the Los Angeles airport is now located, one at Phoenix, and the fourth at El Paso, the latter two at the former wireless station of the Federal Telegraph Company.

With these four stations we were able, by triangulation, to find the mysterious German station. It was located near Mexico City.

One of my assistants, Ensign Robert Morton of the Naval Reserve, knew an astronomer at the Mt. Wilson laboratory who had a Western Electric amplifier at his disposal. He borrowed it and we set it up in a barn on the bean farm. True to form, the amplifier emitted a series of loud squeals, and on the second night, at about four o'clock in the morning, we were ordered out of the barn with our hands up at the point of a gun in the hands of an Army Intelligence man. It appears that the farmer on whose land we were operating became suspicious of the strange noises and reported us to the Army. The incident came to a happy conclusion when all of us, except the farmer, shared breakfast at a hotel in Inglewood.

Soon after returning to Mare Island we received a letter from the State Department informing us that our Ambassador in Mexico had observed the construction of the German station while horseback riding in Chapultepec Park. We later learned that C. Reuthe, the German manager of the Sayville station on Long Island, was the builder of the Mexican station and that it had a 100-kilowatt spark transmitter once used at Nauen, Germany (POZ). The set had been smuggled through the Allied blockage on a Swedish vessel. Reuthe, and his assistant, a Polish engineer, fled the United States the day prior to the declaration of war by the United States in April, 1917.

Bootleg Vacuum Tubes

The laboratory at Mare Island was in need of a vacuum pump in 1915. I learned that such a device could be procured from a glassblower named Hyde in Oakland, whose specialty was the manufacture of mercury vacuum-tubes for battery-charging equipment. On my visit to his shop he showed me a quantity of small tubes which he had evacuated on his pump. He told me that a few days earlier two men, named Moorhead and Meyers, had come to him with a deForest audion and asked if he could make a number of duplicates of this tube. Hyde was a resourceful engineer. Instead of copying the deForest audion with its bulbular construction, he used an ordinary piece of glass tubing instead, the finished product resembling a test-tube sealed at both ends, and with its filament brought out through the center.

Dr. deForest had a booth at the Panama Pacific International Exposition at San Francisco in 1915 which he left in charge of Meyers. Moorhead was a wireless operator who had been employed by Isbell on the Marconi construction projects at Juneau and Astoria. Upon returning to San Francisco, Moorhead visited the Exposition and there saw Meyers who was selling the bootleg tubes at five dollars each over the counter of the deForest booth - and pocketing the proceeds.

Returning to Hyde's factory to pick up my vacuum pump, he told me that Moorhead and Meyers had since come back for more tubes. They brought with them a radio receiver equipped with one of Hyde's tubes, the receiver working so well that both men locked arms and danced around the shop together.

They gave Hyde an order for fifty more tubes. My friend, Bill Larzelere, bought one of these tubes from Meyers at the Exposition for five dollars, and brought it to my home to test. It worked well, and I still have it.

After the fifty tubes had been sold, Moorhead and Meyers went to a glassblower in Berkeley named Fosdick, who did work for the Physics Laboratory of the University. They left a sample with Fosdick and an order for fifty tubes. Fosdick knew nothing about pumping tubes, a necessary process done while the tubes were hot, and consequently they all lost their vacuum when lighted up. Yet they sold at the Exposition at the same price as the tubes made by Hyde. The Fosdick tubes could be identified by their colored rubber sleeving over the wires emanating from the bulb, whereas Hyde used colored braided sleeving. Meyers came to the Navy Yard with a few sample tubes, asking that I give him an order for a quantity of them. Instantly I recognized them as being the worthless Fosdick tubes. I told him that all Navy purchasing was done in Washington and asked him to leave the few samples so that I could test them on the Alaska supply ship Satum; if they proved satisfactory, I promised to send a favorable recommendation to Washington. The samples proved worthless. Meyers fled into Canada to escape his creditors and his wife. Eventually, he was employed again by Dr. deForest in New Jersey. Neither Hyde or Fosdick were ever paid by Meyers or Moorhead for the tubes they made for them.



MOORHEAD AND CUNNINGHAM

Moorhead established a laboratory and factory on Mission Street in San Francisco in 1916 where he worked long and hard to develop a good tube, eventually meeting with considerable success. The mystery of how he financed his venture was solved when it was learned that the money came from Elmer T. Cunningham, of Haller-Cunningham Electric Co.

In due time a brisk export business in the Moorhead tube found the promoters in a lawsuit by the Marconi Company for infringement of the Fleming patents. The Marconi lawyers experienced much difficulty in their pursuit of this action, and consequently a license agreement was negotiated with Cunningham. The pact provided that he be permitted to hand-pick his own tubes from the Marconi production line and discontinue the sale of the tubes made for him by Moorhead. This contract was in turn inherited by RCA and, as all old-time radio men know, the Cunningham tubes were the best of the lot. Cunningham later became President of RCA Manufacturing Company.

I purchased large quantities of the Moorhead-made Cunningham tubes in the war surplus market and used them to equip the Federal Telegraph Company's new coastwide radiotelegraph system in 1920-1922.

THE FIRST TRANSCONTINENTAL TELEPHONE

Telephone communication across the United States was inaugurated in 1915, made possible solely by Dr. deForest's amplifier. The rights to this amplifier were acquired by the American Telephone and Telegraph Company in 1912, after which a number of innovations and improvements were made by the Bell Telephone Laboratories.

At the invitation of the Telephone Company's engineer, I was among those present in the Native Son's Hall in San Francisco the evening before the service was officially opened. From a telephone on the main floor of the hall, I talked with a man in the basement over some 7,000 miles of wire, via New York City to San Francisco.

During the 1915 World's Fair in San Francisco, the A.T.T. Co. had an exhibit in the same building with deForest. Representatives of the telephone company explained the details of the transcontinental service, giving no credit to Dr. deForest for his tube and amplifier which made possible the success of this

HARADEN PRATT STORY—DICKOW

achievement. Rather the contributions of Dr. Pupin were prominently related in a brochure issued by the telephone company, "The Story of a Great Achievement," which was distributed to the audience and in which the fundamental work done by deForest was wholly ignored.

The infuriated deForest answered in kind. He ordered a supply of brochures printed - but with his own picture on the front cover - and passed them out to visitors to the telephone company's exhibit. Furthermore, he displayed a twelve-foot banner above his booth, proclaiming: The deForest audion amplifier, leased to the A.T.T. Company as a telegraph relay, made the Transcontinental line possible.

BRICK CHIMNEYS FOR THE NAVY

In Washington, I was placed in charge of construction and maintenance of all high-power radio stations. Some had already been completed at San Diego, Pearl Harbor, Darien, and Cavite, while new installations were going in at Guam, Sayville, Tuckerton, Annapolis, Puerto Rico, and a 1000-kilowatt plant near Bordeaux, France. Additionally, an Alexanderson Alternator system was under construction at New Brunswick, New Jersey and I spent considerable time with Alexanderson and Harold Beverage on this interesting project.

General "Black Jack" Pershing, who commanded our forces in France during World War One, expressed great concern when the American submarine telegraph cables off Fire Island, New York were cut by the Germans in July, 1918. At Pershing's instigation it was decided to build another super-power station of 1,000-kilowatts capacity in the United States. North Carolina was chosen as a suitable site because of immunity from sleet storms which wrought havoc with wireless antennas during the winter of 1917-1918. Another reason for locating it in North Carolina was because this was the home state of Josephus Daniels, Secretary of the Navy, who was required to provide the funds by requesting an allotment from the special appropriations committee which served on the orders of President Wilson.

Daniels was reluctant to ask the President for funds to build the new station. I then toured North Carolina in a Model-T Ford automobile and picked a site near Monroe. Getting no action from Secretary Daniels, I returned to Monroe and prevailed upon Mayor Sykes and the Chamber of Commerce president to meet with Daniels in company with a political delegation which included a Senator and two members of the House. The approach proved successful, and on the third day the allotment was made.

Steel was in critical supply during the war years. Bernard Baruch's office refused to give us the necessary material for the huge steel towers. I then let a contract for several 600-ft. brick chimneys to support the antenna. The radio apparatus would be housed in a room at the base of one of these chimneys.

The contract for the chimneys was intended for the Alphonse Custodis Chimney Company of Brooklyn, New York. It required the entire output of several brickyards in the South to manufacture the enormous quantity of bricks for the project. The contract award was in the amount of \$3,250,000. The papers were on my desk, needing only the signature of Franklin D. Roosevelt, Assistant Secretary of the Navy, and an additional endorsement by the fiscal officer.

Then came the Armistice. The project was abandoned.

The land was returned to its rightful owners and appropriate payments in damages made.

Alexanderson had offered suggestions for the design of the antenna proper, making a sketch of it on a tablecloth during a luncheon meeting in the old Shoreham Hotel, then at H and 15th St., N.W., Washington, using a thick, soft pencil he always carried in his pocket to illustrate his design. In modified form, it was used later at the RCA Rocky Point station in 1920.

SCANDAL

In May, 1918, a scandalous deal came to public notice when the U.S. Navy Department made plans to purchase the radio station properties and patent rights of the Federal Telegraph Company. The move was made to prevent the English Marconi Company from annexing these acquisitions at a price of \$1,650,000. When the facts were revealed, Washington Dodge, President of Federal Telegraph, respected former Tax Collector of San Francisco and Bank Director, shot himself in the elevator of the Exposition Building in San Francisco. The company thereupon underwent a complete reorganization. A Congressional Committee investigated charges of bribery, but none were substantiated.

In 1919, legislation was introduced in Congress - at the instigation of the Navy Department - to give the Government a monopoly of all external radio communications, but the measure

failed of passage. Also in 1919, the Radio Corporation of America was organized at the request of the Navy Department to prevent the patent rights of the Alexanderson Alternator from being sold to the English Marconi interests.

At the same time, a decision was reached to discontinue the use of spark equipment on ships operated by the U.S. Government. Three hundred small arc-type transmitters were ordered from the Federal Telegraph Company for vessels of the United States Shipping Board.

I resigned from government service at the end of 1919 and became an assistant engineer for Federal Telegraph at Palo Alto, California, in January 1920.

I was with Federal until 1922, then went to Mexico and negotiated several contracts of my own for various types of communication systems, but all were cancelled when the de-la-Huerta revolution started in early 1923.

I settled in Los Angeles, married Florence Bacon, and acquired an orange by-products company, employing George Baxter, formerly of station PH as manager.

One day I met a friend, Robert Morton, on the street and he told me he was Secretary of a new company organized to bid for the first air-mail route in the West which was to operate between Salt Lake City and Los Angeles. The Post Office Department, which was operating the transcontinental air-mail service between New York and San Francisco, had decided to turn these operations over to private contractors. Morton asked if I would build them a radio communication system if they were given the award. They were successful, and I built the system in 1925 and 1926. The stations were at Los Angeles, Las Vegas, Milford, Utah, and Salt Lake City. The Line was called Western Air Express, now Western Air Lines.

Short-wave radio was then in its infancy and little was known about its behavior. With a base station in Los Angeles transmitting signals on a predetermined schedule, my wife and I spent about two months in the southwestern desert in our car with a receiver, studying radio wave propagation. As a result of these tests, we adopted the 20- and 50-meter wavelengths for our airways system. We asked RCA for quotations on the equipment we needed but they replied that they had nothing suitable available.

It was difficult for us to keep from running afoul of the patent laws, in that RCA held the patents on much of the apparatus we needed, particularly radio tubes, on which they held a virtual monopoly. We organized a company in Nevada called Airways Radio Service, Inc., and after much searching I located a supply of 250-watt tubes made by an X-Ray manufacturer in Hamburg, Germany. We bought enough of them to last for several years.

Our chief pilot was C.C. Moseley. He laid out the route in a de Havilland biplane. Coming into Las Vegas for fuel on one of his trips, he found a large crowd of people milling around the field which had been constructed by scraping rocks off the desert floor. They had followed the gasoline truck to the field. When the pilot took off his plane appeared very wing heavy. Imagine his surprise when a man climbed over the lower wing - a hobo who rode the brake rods into Las Vegas and followed the crowd to the field! He awaited his opportunity and grasped the lower wing skid when Moseley took off. He rode the plane into Los Angeles. The next day he appeared at the office of the air line and begged for a lunch.

The day finally came when air-mail service was officially inaugurated. Maury Graham started in Los Angeles and refueled at Las Vegas. Clouds were lying on the mountains to the northeast, making it necessary for Graham to follow the Union Pacific Railroad through a canyon, keeping the rails in view by looking back over his shoulder. Suddenly he saw an airplane pass below him going in the opposite direction; Jimmy James, carrying the westbound mail from Salt Lake City was doing the same thing. James lived to become President of the line. Graham, after racking up trophies for flying the greatest number of miles without accident, ran out of fuel in a snowstorm near Zion National Park. Weeks later the plane was found undamaged with the mail sacks still aboard and, some miles away, was Graham's body. He had cooked a can of beans and went to sleep in the snow forever.

Riding around with these pioneers was exciting. For diversion and fun we often chased bands of wild horses in the Utah wastes.

Early in 1927, Harris Hanshue, Western Air's President and a former automobile racing driver, told me at lunch in Salt Lake City about the Air Commerce Act which was about to establish aviation departments within the government. He suggested that I apply for the job of running the radio aid development program which was to come under the jurisdiction of the Bureau of Standards. Knowing Dr. J.H. Dellinger from World War One days, I wrote him and was promptly hired, being placed in charge of this work. It was there that I met the famous Lloyd

HARADEN PRATT STORY DICKOW

Berkner who became a life-long friend. He was to go with Admiral Byrd's first expedition to the Antarctic as communications expert, and was assigned to my group for a short time to learn what we were doing.

Needing additional help, I found an electrical engineering professor at Lehigh University named Harry Diamond on the lists of the Civil Service Commission; I gave him an appointment. He proved invaluable. Later he developed the radio sonde for upper atmosphere weather reporting, and then became famous for his contributions to the proximity fuse which proved so highly successful in World War II. An award of the Institute of Electrical Engineers is named in his honor.

During the course of my new assignment, we brought forth the first successful radio range, after learning how to correct the uncontrollable "night effect" error.

In July 1928 I received three offers. One was to build a trans-Pacific system for Stanley Dollar, one to head a department of aviation in the Bell Telephone Laboratories, and one to join the newly-founded International Telephone and Telegraph Corporation. I chose the latter, thus writing finis to the aviation chapter of my career.

V.P. AND CHIEF ENGINEER AT I.T.&T.

The I.T.&T. Corporation had just completed the purchase of All America Cables, and the Mackay Companies which owned the Commercial Cable Company. Other acquisitions were the Postal Telegraph Company and the Federal Telegraph System that I had built. I.T.T.'s objective was world-wide expansion, with the sky the limit. They appointed me Vice-President and Chief Engineer of the radio subsidiary companies. Over a twenty year period we spread a system of radio communication all over the world.

From 1927 to 1951 I was a delegate to most International Communication Conferences. When war threatened I was appointed to the National Defense Research Committee and later became Chief of one of its divisions. In 1946 I was invited to the atom bomb trials at Bikini Island, and in 1947 became a Panel Chairman of the Research and Development Board of the Department of Defense.

Highlights of my earlier activities in the I.T.&T. Corporation involved intensive development work to produce devices immune to patent infringement. Some of the equipment and gadgets we developed were wholly unique. Then we won a major patent suit, but it took seven years and the Supreme Court to do it. Our success was largely due to certain shop rights held by the Federal Telegraph Company to some of the deForest inventions made while he was with the company in 1912. To Ellery Stone goes the credit for the legal preservation of these rights.

The Second World War saw many of our people enter the military services. We were asked to provide a communications team to accompany the Army on its invasion of North Africa, in that the military did not want to burden itself with dispatches from the Press and messages from the soldiers. We erected a station in Algiers with a crew headed by LeRoy Spangenberg. Later we supplied a team which accompanied General Patton across France and into Germany. And still another team that entered Berlin the day following its capitulation. When the French government requested us to withdraw from Algiers we established a large relay station in the international zone of Tangier which remained active for many years.

As a publicity gesture we undertook to provide communication for Admiral Byrd's first Antarctic Expedition. But the Communications Act of 1934 made such public service facilities unlawful and the Navy thereupon took over the activity for subsequent expeditions.

At a meeting with Admiral Byrd in New York, he mentioned that he was taking a quantity of anthracite coal with him as a precaution. Asked why, he explained that explorer Scott, who reached the South Pole only days after Amundsen, had put his flag there on January 18, 1912, and that he had taken with him a quantity of kerosene in five-gallon cans. Upon returning to his base he found the kerosene gone. The Antarctic cold had crystallized the soldered-joints of the containers and they fell apart. Having no fuel on hand with which to melt the snow, and for heat and cooking purposes, his party perished. Admiral Byrd's careful planning precluded another disaster of this kind.

Telecommunications Advisor

To The President of The UNITED STATES

In Spain during 1951, I was asked to accept an appointment as Telecommunications Advisor to the President of the United States. Such a post had been recommended by a special com-

mission formed by President Truman to study telecommunications within the government. I flew to Washington to see the President. He urged me to accept the position, stating that various departmental officials had voiced objections to other nominees. Retiring from I.T.&T., I started this activity in October, 1951. In June, 1953, President Eisenhower abolished it on the advice of a specially-appointed committee which ruled that too many individuals were reporting to the President directly - and in a measure they were right.

President Truman was a very personable and down-to-earth man, entirely loyal to his helpers, if not too much so. He would stand back of a man even if he knew him to be wrong.

I had to be careful not to ask him for help, as otherwise he would immediately reach for the telephone and stir-up all officialdom. When I visited him he often unburdened his troubles. One day he handed me a small book whose pages carried statements written by President Grover Cleveland and his Cabinet officers. He said a small boy had found this book in a trash can and sent it to him. I asked him what he was going to do with it and he replied that he intended to give it to some boy that might visit the White House and who would treasure such a souvenir.

Truman was a hard worker. One Monday morning I saw a huge pile of papers on his desk. I asked him what they represented. He called it his ween-end homework, stating he never had time to read in the office because of the great number of callers. But it was his ability, he said, to dismiss the cares of the day when retiring and enjoy a good night's sleep. Yet he was always up and around before six in the morning to enjoy his daily walk.

President Eisenhower, on the other hand, worked through a staff of assistants. People were not permitted to run into and out of his office at will. No doubt this procedure was a result of military life devoid of political overtones. I gained the impression that he did not care much for the job; he seemed irked at the loss of his personal freedom. Soon after he took office I happened to look out of a window to observe a traffic jam in the street. Soon cameramen were erecting tripods on the roofs of automobiles. Eisenhower was practicing a little golf-putting on the lawn. This invasion of his privacy seemed to annoy him immensely.

PRESIDENT OF I. R. E.

I first became a member of both the Institute of Radio Engineers and the American Institute of Electrical Engineers in 1914. Elected a director of the former, I became President in 1938 and continued as an officer and director until 1965, when I was named Director Emeritus. I served on the committee that negotiated and administered the merger of these two societies into the Institute of Electrical and Electronics Engineers, which came into being in 1963 with a worldwide membership of some 150,000 engineers.

In 1938, the Institution of Radio Engineers of Australia made me an honorary member at Sydney during their World Radio Convention. I was also a charter member of the Institute of Aeronautical Sciences, now the American Institute of Aeronautics and Astronautics.

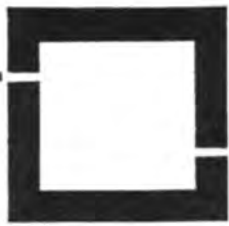
In Retrospect

Not much remains of the kind of wireless and radio communications that developed during the major part of my career. Long-distance communications, first by what we called long waves (now known as very-low frequencies) and later by what we first called short waves (now called medium-high frequencies) have largely been replaced by other methods, except in special instances. These two methods which filled a worldwide void in communications and provided inexpensive systems to sparsely-settled countries were subject to the vagaries of nature caused by interference from lightning discharges and disturbances in the ionosphere due to solar events and the eleven-year sunspot cycle. As the demands for greater reliability, accuracy, and the need for increased volumes of traffic arose, newer methods were gradually developed. Now, only the ship-to-shore wireless services continue very much the same as they have in the past.

Individual message service by telegraph, which only a few years ago constituted practically all telegraph traffic, now takes second place to leased circuits and automatic printer connections by dialing, as is done by telephone. Data processing, and the inter-connection of computers on networks such as used by the airline reservation services, are demanding an ever greater share of the communication facilities. Astonishing performances have been attained in outer space for the control of vehicles and the transmission back to earth of information such as pictures, over many millions of miles.

Most of today's accomplishments were not even in the dreams of mankind a few short years ago. Wireless telegraphy has come a long, long way since Marconi sent his first signal across the Atlantic in 1901.

BY Wm G. Gerlach



History of the Pacific Mail Steamship Co.

Howland Chauncey & Aspinwall acted as incorporators for the Pacific Mail Steamship Company which was chartered under the laws of the State of New York on April 12, 1848, for a term of 20 years.

Three of their first steamers were the side-wheelers "CALIFORNIA", "PANAMA", and "OREGON."

The tonnage of the "CALIFORNIA" was 1,057, length 200 feet with a beam of 33.6 feet, and a 20 foot depth of hold. She was built with white oak and cedar, and was copper sheathed beneath the water line. It had staterooms accommodating 50 to 60 passengers in the after part of the steamer. It had 3 masts, Brigantine rigged.

The tonnage of the "PANAMA" was 1,087, while that of the "OREGON" was 1,099. Otherwise the specifications of the three steamers were practically the same.

The "CALIFORNIA" sailed from New York with over 500 tons of coal aboard. Her draft, with water in boilers, but with no coal, was 5'5", which with coal and cargo aboard, was increased to 15'8".

The provisions of the charter required that the ships of the Pacific Mail Steamship Company, which were subsidized by the United States Government, and were operated between California and the Atlantic Coast, was to call and discharge mails at San Diego, Monterey and San Francisco.

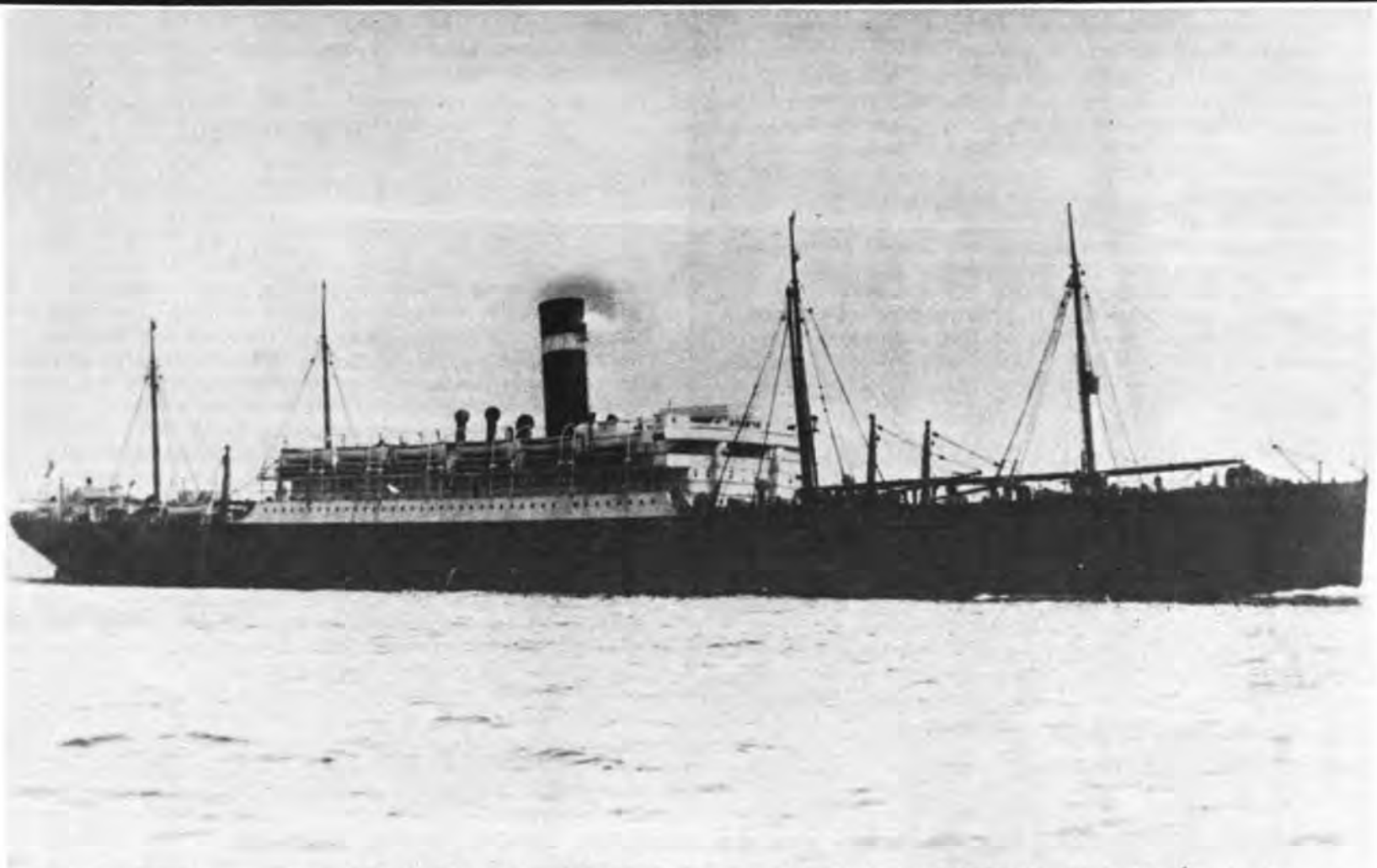
The Territory of Alta California had not been of particular interest to Americans until after the close of the Mexican War, but the Oregon country, to the North, claimed attention since the first days of the Republic, especially because of Maritime and fur trading interests.

In later years when the Pacific Mail Steamship Company was under the direction of R. Schwerin, assisted by J. C. V. Comfort, they operated the steamers "SAN JOSE", "SAN JUAN", "CITY OF PARA", and "NEWPORT" in the San Francisco-



William G. (Bill) Gerlach Senior SGP-104 (Charter Member) authored and published a fascinating book back in 1978 which he titled "Nostalgic Reminiscences of a Telegraph Operator". As he served as a Journeyman telegrapher on railroads and in telegraph offices for many years transferring to wireless later in life, he had over half a century of experience to draw from. In this sophisticated communications age, when skilled machines have replaced the operator, the "Certificate of Skill" back in 1911 has a special meaning. The men had the skill; the equipment was unskilled - rudimentary and often broke down. That they got the message through at all is a tribute to their dedication to their trade.

Bill published a revised and updated edition of the "PHILLIPS CODE" book used largely as standard throughout our business. He also authored the accompanying story titled "History of the Pacific Mail Steamship Company" which is being published here for the first time. Bill started his 'sea-going' career in 1911 on the SS City of Topeka. On the wire side of his career he worked the PX Wire and Stock Brokers wires - some of the fastest in the country. He was also on duty when the earthquake struck in San Francisco back in April of 1906. Bill has long since retired and lives in a fine home for Seniors in Claremont which is in Southern California.



SS. MONGOLIA - WWN The SS Mongolia and Manchuria were 'sister' ships built in 1903. They were the largest passenger liners on the Pacific for quite a few years. 600' long, 48' beam 13,368 tons. Captain Thomas Blau skippered the Mongolia while Capt. Dixon was assigned the Manchuria which was sold and renamed the SS. Pres. Johnson in 1940. The Mongolia later sailed the Atlantic for the Atlantic Transport Lines. Call letters of the Manchuria were "WNE".



Picture from the collection of Joe D. Williamson shows the Santa Cruz in the Columbia River. Temperature about 80° less than it will be at destination in India. Continued - column left below.

SS. SANTA CRUZ - WBD

The Pacific Mail S.S. Company started service on the EAST INDIA run on March 25th 1918 with the S.S. Santa Cruz. The SS. Colusa and the SS Volunteer alternated on the route through 1918. In 1919 the Volunteer was replaced with the Haleakala and West Sequana. Later the route was taken over by the Creole State, Wolverine and Granite States in 1921 and in 1922 the President Hayes and President Harrison were added while the Granite State was rescheduled.

In 1925 Pacific Mail sold the Ecuador, Columbia and Venezuela to the Grace interests while the House Flag was sold to the Dollar Steamship Company. Pacific mail liquidated in 1942 ending 94 years of corporate history. During the first quarter of the 1900's they played a dominant role in Pacific Ocean travel.

"Ye Ed" made the trip to India on the Santa Cruz Nov. 1919 to Mar. 1920 with Vernon M. "LG" Goldsmith. The picture of "Goldie" shows him with a couple of pet dogs he was taking care of for "Bring them back alive Buck". Buck truly had a menagerie of animals and rare birds and Goldie consented to help take care of them for him. Aside from a couple of big snakes getting away (never found) which kept us and the passengers 'alert' for several weeks plus an orang-o-tang climbing the mast to its very top and retrieved by a seaman going aloft with a net, the voyage was peaceful. "Goldie" served for quite a period as Chief at "KPH" and finally at "KHK" in the Islands. "Ye Ed" was able to persuade Goldie to join the CAA circa 1928. He became Chief at Memphis and became a silent key many years ago.

Included among the names of operators on the WBD Roster are the following: Howard Cookson, L.H. Hardingham, George E. Van Order, J.D. Flatherty, William A. Breniman, Vernon N. Goldsmith, Otis "Billy" Hill, George Renish, Franklin (JC), Wm F. "Willie" Heckman, Charlie Morenus and J.W. Morrow.



VERNON M. [LG]
GOLDSMITH

R/O Pacific Coast
from 1919 until 1928
He sailed on the
Steamers Nehalem,
Senator, Santa Cruz,
Manoa - also Chief
at "KPH" and "KHK".
He became a Silent
Key in 1963.

Panama service, while in the Trans-Pacific service they operated the "KOREA", "SIBERIA", "MANCHURIA", "MONGOLIA", "CHINA", "PERSIA" (Ex Coptic), "ASIA" (Ex "DORIC"), and the "NILE."

The "KOREA" and the "SIBERIA", sister ships, were two of the crack passenger liners and were the favorites of the Globe Trotters of that period, while the "MANCHURIA" and "MONGOLIA" were larger vessels, adapted to both passenger and freight, but more of the freighter type.

The "KOREA" made a speed record of 10 days, 15 hours, Yokohama to San Francisco.

The "ASIA" was wrecked on the China Coast on April 23, 1911.

It was said that the "NILE", acquired from the Royal Mail Steam Packet, had the distinction of having more brass work than any of the other ships in the fleet.

During 1915, the La Follette Seaman's Act caused the Southern Pacific Company to divest itself of the assets of Pacific Mail stock, after 65 years of service.

The Pacific Mail ships "KOREA", "SIBERIA", "CHINA", "MANCHURIA", "MONGOLIA", and "PERSIA" were sold to Atlantic Transport.

The "PERSIA" was resold to the TKK (Toyo Kisen Kaisha) and renamed "PERSIA MARU." In 1909, the TKK had started operations with the new steamers "CHIYO MARU" and "TENYO MARU."

In December, 1915, George J. Baldwin, backed by W. R. Grace & Co., purchased the Pacific Mail Steamship Company. Baldwin became President, J. H. Rossiter, General Manager, and Daulton Mann, Executive Vice President.

The capital was increased to \$4,000,000 to buy new ships for the Trans-Pacific service.

Late in 1915, the China Mail was organized in Hong Kong. They operated the "NILE" and the "NANKING" (Ex Pacific Coast Steamship Company's "CONGRESS")

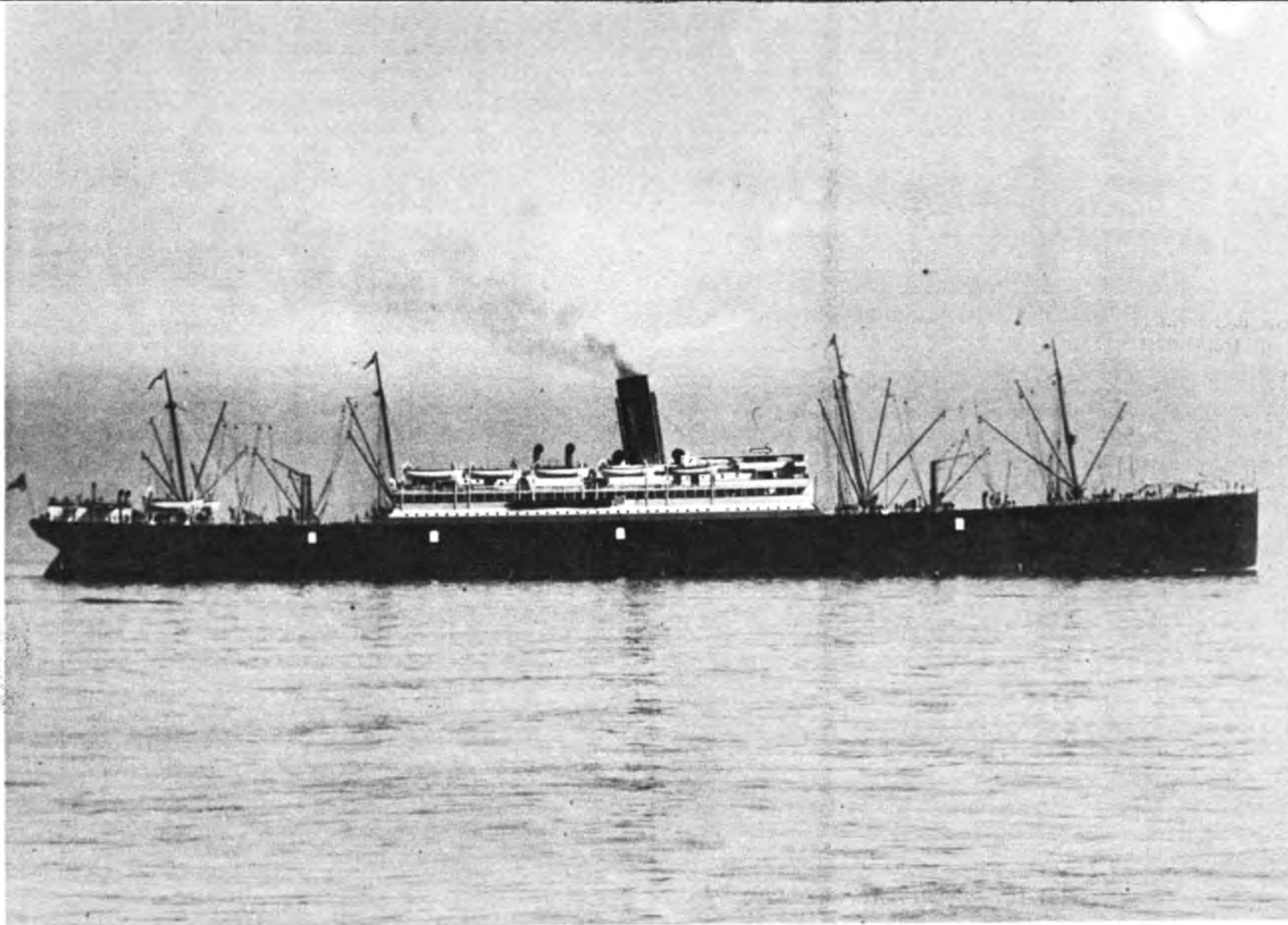
In 1917, the Grace ships "SANTA CRUZ" and "COLUSA" were put in the East India service. The "COLUSA", incidentally was a sister ship to the "ROBERT DOLLAR" of the Dollar Steamship Company.

On Aug. 22, 1918, a dinner was given at the Hotel St. Francis by the employees of W. R. Grace & Co., Pacific Mail Steamship Company, and Sperry Flour Co. in honor of Mr. J. H. Rossiter on his departure for Washington, D. C. to assume the duties of Director of Operations, United States Shipping Board, with 69 in attendance.

In 1925, assets of the Pacific Mail Steamship Company were auctioned by the United States Shipping Board. Five 535's were sold to the Robert Dollar Steamship Company over the protests of the Grace interested. They included the Presidents "CLEVELAND", "PIERCE", "TAFT", "WILSON", and "LINCOLN".

(Continued on Page 16)

EARLY PACIFIC MAIL SHIPS ON THE PACIFIC



PACIFIC MAIL HISTORY—GERLACH

In 1925, the "ECUADOR", "COLOMBIA", and "VENEZUELA" were purchased by W. R. Grace & Co. from the Komenklijke Nederlandsche Stoomboot Matschappij N V (The Royal Dutch Company) which were referred to as the "Dutch ships" and were placed in the Trans-Pacific service under the American flag.

In 1942, final liquidation of the Pacific Mail Steamship Company took place in New York, ending a period of 94 years in the steamship business under the American flag.

S.S. MANCHURIA - WVE

Built in 1904 by the New York Shipbuilding Corporation, her first name was the SS. Minnekahada but renamed Manchuria by Pacific Mail before she made her first voyage. She was flagship of the Pacific Mail for some eleven years before being sold to American line for service on the Atlantic. This was due to heavy competition from the Japanese lines with larger ships and faster speed. At the end of her career she had passed through nine house flags. She was the SS renamed the Santa Cruz, sailing for the Italian she carried thousands to the Argentine and Brazil to start life in a new country. She had sailed two and a half million miles before being sold for scrap in 1952. The Manchuria had sailed for 42 years - a very advanced age for an ocean liner.



Go East or West by Sea
 Visit Mexico, Guatemala, Salvador, Nicaragua
 Panama Canal, Havana

The new de luxe passenger and express-freight service of the Pacific Mail Steamship Company between San Francisco, Los Angeles and New York is a travel opportunity of never-ending interest and delight.

Sight-seeing stops at picturesque Manzanillo, Mexico; San Jose de Guatemala; Acajutla and La Libertad, Salvador; Corinto, Nicaragua; Cristobal and Balboa, Canal Zone; Havana, Cuba; Baltimore and Norfolk.

Next sailing from San Francisco April 18; from Los Angeles April 20; from New York April 18, and about every 18 days thereafter.

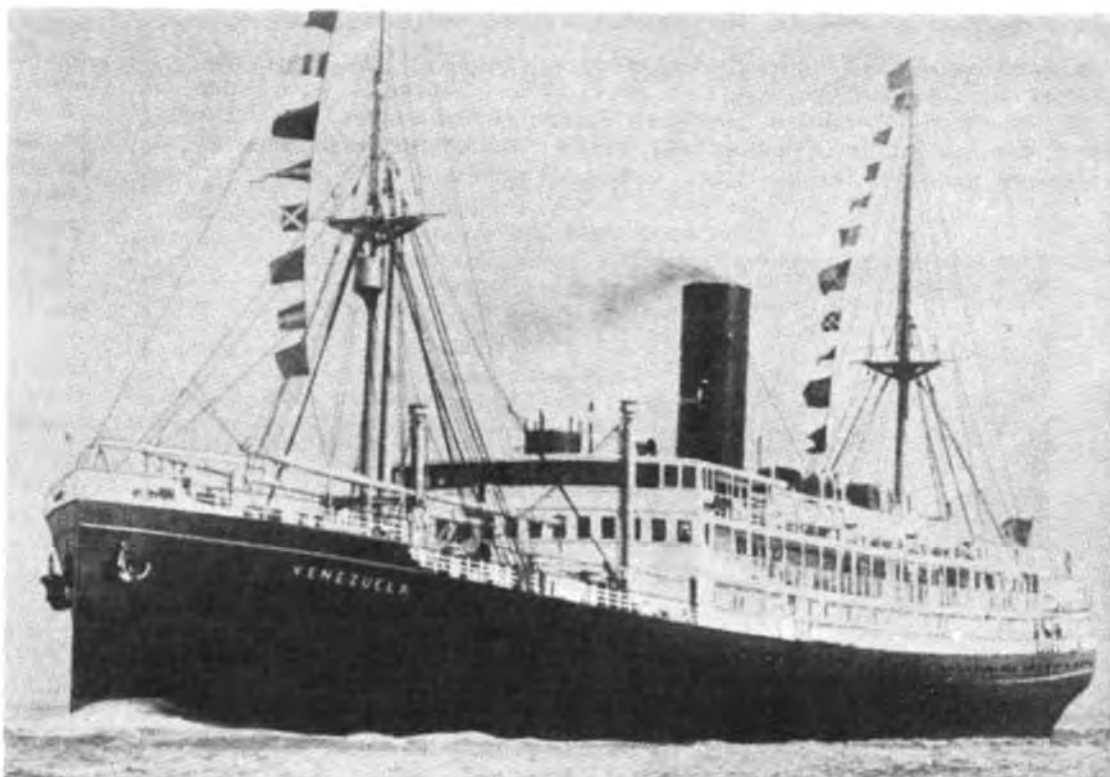
Modern American twin-screw ships "Colombia," "Ecuador," "Venezuela" and "Santa Ana," especially designed for Tropical service. De luxe suites. Home-like staterooms. Electric fan in every cabin. Deck sports, music. Swimming tank. More than 73 years' experience in pleasing passengers makes Pacific Mail cuisine a delight. Fares, first-class, \$270 and \$300.

PANAMA SERVICE—S. S. San Juan—April 13—Sailings about every 22 days—between San Francisco, Los Angeles, Mexico, Central America and Canal Zone.

For complete information apply to nearest Pacific Mail office or to any steamship tourist agent or railroad agent.

PACIFIC MAIL STEAMSHIP CO.

508 California St., San Francisco, Cal. 503 So. Spring St., Los Angeles, Cal. 10 Hanover Square, New York



Ships suitable for Trans-pacific service were difficult to buy in war time (1916). The Pacific Mail was finally able to buy three new steamers from The Royal Dutch SS Co. They were the Ecuador (WBN) Capt. Fleming; Columbia (WHC) Capt. Blau and the Venezuela (WBG) Cap. Nelson. All three ships carried Federal Telegraph Co. Equipment. They were on the Transpacific run from 1916-1920 when they shifted to the S.F. NY run until 1925 when they were sold to W.R. Grace



Ships of the Pacific Mail Steamship Company

1849 - 1925

1873-1886 — Honduras* — 1816 tons Screw
 1873-1882 — Salvador* — 1065 tons Screw
 1873- — Quang Se — 2788 tons Screw
 1873- — McGregor — 2167 tons Screw
 1874-1889 — Granada — 2572 tons Screw
 1874-1895 — Colima — 2905 tons Screw
 1875-1875 — Moses Taylor — 1372 tons SW
 1873-1875 — Nevada — 2143 tons SW
 1873-1880 — Dakota — 2135 tons SW
 1873-1876 — Nebraska — 2143 tons SW
 1874- — City of Guatemala* — 1505 ton Ser
 1875-1910 — City of Pekin 5080 tons Screw
 1875-1885 — City of Tokyo* — 5079 tons Ser
 1875- — Vasco de Gama — 2912 tons Screw
 1875- — Vancouver — 2923 tons Screw
 1875-1877 — City San Fran* — 3009 ton Ser
 1875-1893 — City New York* — 3019 ton Ser
 1876-1915 — City Sydney — 3016 tons Screw
 1876-1885 — Australia — 2755 tons Screw
 1876-1885 — Zealandia — 2489 tons Screw
 1876-1920 — George W Clyde — 1848 tons Ser
 1876-1894 — Clyde — 2016 tons Screw
 1876-1878 — Georgia* — 1643 tons SW
 1876-1891 — South Carolina 2099 tons SW
 1876-1892 — Crescent City 2003 tons Screw
 1881-1901 — City R. Janeiro* — 3548 tons Sc
 1881-1924 — City of Para — 3532 tons Screw
 1882-1921 — San Jose — *2080 tons Screw
 1882-1925 — San Juan — 2076 tons Screw
 1882-1901 — San Blas — *2075 tons Screw
 1886-1925 — Newport — 2735 tons Screw
 1889-1915 — China II — 5060 tons Screw
 1890-1915 — Barracouta* — 2152 tons Screw
 1891- — Nicaragua — *1783 tons Screw
 1891-1915 — Costa Rica III — 1783 tons Ser.
 1892-1896 — Colombia — 3615 tons Screw
 1892-1919 — Peru — 3528 tons Screw
 1895-1918 — City of Panama — 1490 tons Ser
 1895-1927 — Aztec — 3508 tons Screw
 1896-1898 — Starbuck — *2157 tons Screw
 1902-1915 — Korea — 11276 tons TS
 1903-1915 — Siberia — 11785 tons TS
 1904-1915 — Mongolia — 13635 tons TS
 1904-1915 — Manchuria — 13638 tons TS

1907-1911 — Asia ex-Dorie — *4784 tons Ser
 1907-1915 — Persia ex-Coptic — 4352 tons Ser
 1908-1909 — Indiana — 3101 tons Screw
 1910-1918 — Pennsylvania — *3104 tons Ser
 1911- — Kansas City — Screw
 1911-1915 — Nile — 5988 tons Screw
 1916-1925 — Ecuador — 5544 tons Screw
 1916-1925 — Colombia II — 5641 tons Screw
 1916-1925 — Venezuela — 5644 tons Screw
 1917-1920 — Santa Cruz — 5081 tons Screw
 1917-1920 — Colusa — 6003 tons Screw
 1918- — Volunteer US — 7995 tons Screw
 1919- — Elipse US — 7589 tons Screw
 1919-1920 — Archer US — 7610 tons Screw

1848-1874 — California — 1057 tons SW
 1848-1861 — Oregon — 1099 tons SW
 1848-1861 — Panama — 1087 tons SW
 1850-1853 — Unleorn — 650 tons SW
 1850-1853 — Tennessee — 1275 tons SW*
 1850-1854 — Carolina — 544 tons T-screw
 1850-1851 — Sarah Sands — 1400 tons Screw
 1851-1853 — Isthmus — 337 tons SW
 1851-1860 — Northerner — 1101 tons SW
 1851-1855 — Columbus — 460 tons SW
 1851-1861 — Republic — 852 tons SW
 1851-1854 — Antelope — 650 tons SW
 1851-1862 — Columbia — 777 tons SW
 1851-1861 — Fremont — 559 tons SW
 1851-1862 — Golden Gate — 2067 tons SW*
 1851-1857 — Constitution 530 tons Screw
 1853 — Winfield Scott — 1291 tons SW*
 1853 — San Francisco — 2272 tons SW*
 1854-1875 — Golden Age — 2181 tons SW
 1853-1877 — John Stevens — 2182 tons SW
 1854-1868 — Sonora — 1616 tons SW
 1860-1864 — Washington — 1640 tons SW
 1860-1869 — Hermann — 1734 tons SW*
 1860-1861 — Certes — 1117 tons SW
 1860-1878 — St. Louis — 1621 tons SW
 1860-1861 — Uncle Sam — 1433 tons SW
 1860-1861 — Sierra Nevada — 1394 tons SW
 1862-1879 — Constitution II — 3315 tons SW
 1863-1870 — Golden City — 3373 tons SW*
 1864-1872 — Sacramento — 2647 tons SW*
 1865-1879 — Colorado — 3728 tons SW
 1865-1871 — Ariel — 1736 tons SW*

1865-1875 — Costa Rica — 1950 tons SW
 1865-1875 — New York — 2217 tons SW
 1865-1869 — Ocean Queen — 2801 tons SW
 1865-1871 — H. Chauncey — 2656 tons SW*
 1865-1879 — Arizona — 2793 tons SW
 1865-1866 — Baltic — 2723 tons SW
 1865-1866 — Atlantic — 2849 tons SW
 1866-1875 — Rising Star SW
 1866-1877 — Montana 2676 tons SW
 1867-1872 — Bienville* — 1558 tons SW
 1867-1878 — Great Republic 3881 tons SW
 1867-1883 — China — 3836 tons SW
 1868-1874 — Japan* — 4351 tons SW*
 1868-1879 — Alaska — 4011 tons SW
 1869-1872 — America* — 4454 tons SW*
 1869-1875 — Oregonian — 1914 tons SW
 1872-1875 — Montana II — 1003 tons Screw
 1872-1875 — Orizaha — 1450 tons SW
 1872-1875 — Pacific — 1003 tons SW
 1872-1875 — Senator — 754 tons SW
 1872-1887 — Costa Rica II — 1457 tons Screw
 1872- — Guatemala* — 1021 tons Screw
 1872-1884 — Winchester* — 487 tons Screw
 1873-1904 — Colon — 2685 tons Screw
 1873-1914 — Acapilco — 2572 tons Screw
 1919-1921 — West Vaca US — 5548 tons Ser
 1919-1921 — Diable US — 5997 tons Screw
 1919-1921 — West Ashawa US — 5609 tons S
 1919-1921 — West Sequana US — 5670 tons S
 1919-1920 — West Conob US — 5899 tons Se
 1919-1920 — West Kasson US — 5937 tons Se
 1919-1920 — West Selena US — 5940 tons Se
 1919-1921 — West Goddo US — 5721 tons Se
 1919-1921 — West Inskip US — 5997 tons Se
 1919-1921 — West Koder US — 5751 tons Se
 1919-1920 — West Calera US — 5721 tons Se
 1919-1921 — Caponka US — 3019 tons Se
 1920-1921 — Point Ronita US — 2675 ton Se
 1920-1921 — Point Adams US — 2671 tons Se
 1920-1921 — Point Lobos US — 2670 tons Se

1920-1921 — Point Judith US — 2670 tons Se
 1920-1921 — West Mingo US — 5940 tons Se
 1920-1921 — West Neris US — 5987 tons Se
 1920-1921 — West Niger US — 5987 tons Se
 1920-1921 — Caddopeak US — 2865 tons Se
 1920-1921 — Jacex US — 2648 tons Screw
 1920-1921 — Lake Faulk US — 2598 tons Sa
 1920- — Haleakala US — 5958 tons Screw
 1920-1921 — Elkridge US — 6318 tons Ser
 1920-1921 — E. Importer US — 5786 tons Se
 1920-1921 — E. Merchant US — 8152 tons Se
 1920-1923 — Cuba* — 3168 tons Screw
 1920-1922 — Crecote State US — 10533 TS
 1921-1922 — Wolverine St US — 10533 ton TS
 1921 — Granite State US — 10500 tons TS
 1921-1925 — G. State US — 14123 tons TS
 1921-1925 — Empire State US 14127 tons TS
 1921-1925 — N. State US — 14187 tons TS
 1922-1925 — Pres Taft US — 14123 tons TS
 1922-1925 — Pres Pierce US — 14123 tons TS
 1922-1925 — Corinto — 1973 tons TS
 1923-1924 — Santa Clara — 4954 tons Screw
 1923-1924 — Santa Paula — 6415 tons Screw
 1923-1925 — Santa Oliva — 6421 tons Screw
 1923-1925 — Santa Barbara — 6197 tons Ser
 1925 — Santa Malta — 6270 tons Screw
 1925 — Santa Rosa — 6415 tons Screw
 1925 — City San Fran. — 2433 tons Screw
 1925 — City of Panama 2434 tons Screw

* Lost

SW Side paddle-wheels
 T-screw — TS Twin screw
 Screw Singl'r screw.



The above listings show the vessels at the time they were in Pacific Mail service. The dates do not indicate building dates.

The last two listings, viz: City of San Francisco and City of Panama, were ordered but never operated by Pacific Mail.

The indicators US indicate US Shipping Board ships

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In order to avoid confusion in the listing of ships that the PACIFIC MAIL LINE owned and operated, a number of name changes were made circa 1922 which do not appear in the above listing. They are as follows:

ORIGINAL NAME	NEW NAME	ORIGINAL NAME	NEW NAME
GOLDEN STATE *	PRES. CLEVELAND *A	EMPIRE STATE*(X)	Buckeye state *A
BUCKEYE STATE *A	PRES. WILSON *A	HOOSIER STATE *A	PRES. TAFT *A
HAWKEYE STATE*	PRES. LINCOLN *(N)	CREOLE STATE *B	PRES. HAYES *B
WOLVERINE STATE	PRES HARRISON *B	WENATCHEE *A	PRES. JEFFERSON *A
BAY STATE A-N	PRES. MADISON A-N	KEYSTONE STATE	PRES. McKINLEY (N)
SILVER STATE A-N	PRES. JACKSON A-N	PINETREE STATE A-N	PRES. GRANT A-N

Legend: (A) Tonnage 14,000. (B) Tonnage - 10000 T. (C) - 7555-Tons.
 (N) Pacific Mail: Golden State, Empire State; Hoosier State; Creole State;
 Granite State; Wolverine State. [MATSON] - Hawkeye; Buckeye. [PAC.S.S.]
 Wenatchee, Bay State, Silver State, Pine Tree State, Bay State [U.S.Lines]
 Panhandle, Old North, Blue Mtn, Centennial. [Military Transport] Cambrai-C
 Chateau Thierry - C, St. Mihell C, Somme - C, Arbonne - C, Chaumont - C



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By Bill Deacon VE3BDO

My previous articles have been mainly about my experiences on the larger ships. This time I will recount for you some details of life aboard deep-sea or salvage tugboats. The two on which I served were the Lorne, owned by Pacific Coyle Navigation Co. at Vancouver, and the Anyox, whose owners I have forgotten.

In both cases, these boats were used for towing Davis rafts from the Queen Charlotte Islands off the NW coast of B.C. to Ocean Falls and Vancouver. Davis rafts could be called wood icebergs, I suppose. They were formed in the shape of a large Churchill-like cigar composed of logs 40 feet long each, and ranging from about 2 to 5 feet in diameter (the logs, not the rafts). The logs were dumped into a cradle made of large 1½-inch wire cables; and as the raft grew in size, it submerged deeper in the water. When the raft was as large as the experts thought it should be, the wire cables were wrapped around the top to keep the whole raft compact. It tapered at both ends, making it look like a massive cigar. The idea was to make the raft a little more seaworthy than the more customary flat boom. The latter is a single layer of logs floating within a sort of log "fence". The problem with the flat boom is that it will not stand any waves, as the logs just bounce out of the boom and drift off to be swiped by log poachers.

Davis rafts couldn't stand a very substantial sea; and we faced quite a challenge trying to get across Hecate Straits that separates the Queen Charlottes from the B.C. mainland in the brief periods of relatively calm seas. This was why they carried a radio operator on board. The operator not only copied the formal weather reports, but also kept an ear open for ships in the general area so as to get actual reports on sea conditions, etc. It was worth the added expense of carrying a radio op, since the high grade spruce, known in those days as "airplane spruce", was worth \$2 per board foot FOB logging camp. Log poachers cruised the towing areas looking for loose logs, since they fetched a very fancy price from the mills in Vancouver.

In August of 1933 while on the beach (i.e. out of work), the Canadian Marconi Co. phoned to advise me that a tow-boat job was available for roughly 3 months at Pacific Coyle Navigation Co. I would work for PCN — not CMC — so I would not accumulate any seniority on the job; but the salary would be the same as at CMC. I accepted, and

chased right down to Coal Harbour at Vancouver to sign on with the SS Lorne at the PCN office.

Upon joining the Lorne, I found that the Captain was not aboard, and the 1st Mate was very busy with the small crew getting the boat in shape for the trip. It had been tied up for a long period, and gear was scattered all over the deck.

I proceeded to the radio room which was somewhat small. The transmitter was the Canadian Marconi 100W4, putting out 100W CW and 50W AM phone or MCW. The receiver was the one I referred to in my first article back in the December issue of TCA. That's the one that developed an open audio transformer, if you recall. Anyway, the operator's accommodation obviously was not part of the radio room, so I looked for the First Mate to see if he knew where the operator's cabin was.

It was discovered back aft, below the deck, and was at that time acting as a storeroom for lanterns, pike poles, rope, shackles and you name it. The Mate told me I would have to clean it out, although he grudgingly allowed that he would have one of the deckhands help me. What do you do when there's a depression and jobs are tight? You bet — I set to work cleaning all the junk and gear out of the very dirty cabin, following which I got a pail of water, soap and a scrubbing brush and proceeded to remove the accumulated grime off the bulkheads and deck. Since the boat was not sailing until the next day, I had all of that first day (oh, joy!!) to scrub down the "cabin" or rat hole so as to make it habitable. The Mate didn't seem to have a very high regard for radio operators, so it was not easy to secure much cooperation from him in getting help with my task. I did get some help from one of the deckhands for a short period, however.

The next day being sailing day, the Captain appeared aboard, so I introduced myself. He was a nice guy — a Norwegian — and I got along with him very well. However, he expected everyone to pitch in on any chore at any time. I was required to provide a spell at the wheel, and when we were hitching up a tow I was expected to handle big steel cables along with the deckhands. One really annoying feature was that the Captain would not allow the steam-operated steering gear to be used except when he was maneuvering the ship in a tight situation. This was because his cabin was right under the steer-

ing gear, and its use kept him awake. Direct steering was OK when towing, as the speed was only about 2 knots; but when we were sailing without a tow at about 8 or 9 knots, it got really tough to move the wheel.

We had a total crew of 10 on board, so the cook was able to provide us with pretty decent meals without having to rush with them. Also, for the group of 5 officers, he was very accommodating in meeting any special dietary requests. For example, I liked a lot of gravy on my roasts or chops, and Larry the cook always gave me that extra slosh of gravy on the plate, muttering in a friendly way that "you like your soup with your meat, Sparks".

It was quite an experience to be on a boat that did not have a flushing toilet. The toilet was situated in the after section of the deck housing at a point where there is low freeboard (i.e. the deck is close to the water); and contained an orthodox toilet bowl minus a cistern. Prior to entering its stately confines, one picked up a bucket with a rope attached thereto and put it overboard to bring up a full pail full of seawater. This, of course, was placed beside you prior to sitting down. Upon completion of your task, you dumped the bucket of water into the bowl and VOILA! the flush was performed in a very simple and effective fashion.

I must go back to my article in the April issue of TCA and recall that the toilet on the Chief Capilano was the only English type with the cistern above your head. You flushed by pulling a chain beside you. Due to the heavy weather on that voyage, if you let the cistern become full, it spilled over on you in heavy rolling of the ship, so you had to listen to the cistern filling; and, when it seemed to be pretty high, you immediately flushed before you could get showered. At the same time, the seas were pounding against the drain pipe from the toilet, forcing air and water back up to the "throne". It was one heck of an experience to come under a water attack both from top and bottom. The latter was solved by getting the ship's carpenter to turn a wooden plug on his lathe. This was placed in the bowl and acted as a buffer against the attacks from the bottom. There were none of these problems on the Lorne.

We proceeded to the J.R. Morgan Logging Co. camp in an inlet whose name I have forgotten. However, it is on the east coast of Moresby Island and a substantial distance south of Sandspit. The Davis raft was all ready to go; and we had simply to attach our tow line and head off with it. Of course, one doesn't "simply" attach a tow line. There is a lot of maneuvering of the boat and the attachment of shackles and bri-

dles so that the force of the tow is spread across the forward part of the raft. This takes some little time and messing about. By the time we set off with the tow, we were all pretty pooped.

Now came all the activity on the part of the radio operator and the skipper to get weather reports and decide if it were safe to attempt a crossing of Hecate Straights with this valuable load of logs. The details don't come clearly to me now, except to remember that the weather was felt to be not suitable for a crossing right then. We anchored in a cove close to coast line, so that we would be in a good position to make a dash (at the mighty speed of 2 knots) for it when the weather broke.

This was when I first learned to play chess. The second engineer, who wasn't substantially older than I, talked me into entering the fray with him. I know darned all about the game; but by the time that voyage was over I had learned a fair bit about it. We spent several days there just doing whatever we felt inclined to — mostly eating — while we waited for the break.

Eventually the time came to make our escape, so away we rushed at the 2-knot flat out rate across the Hecate Straits. To the best of my recollections, we got to the "mainland" around Caamano Sound, then worked a tortuous route around various islands to keep sheltered from any seas.





Every evening the skipper got on the radiotelephone to work the rest of the Pacific Coyle fleet. They all exchanged position reports together with a report on any events or problems of interest to the Head Office. The Marine Superintendent had a good antenna system and receiver in Vancouver; and he listened to these broadcasts every evening. You will readily recognize that the purpose of the exchanges between the two boats was not so much to keep the other captains abreast of events as it was to let the Superintendent know how his fleet was doing.

I had quite a scare one evening while taking my watch at the wheel. We were in a narrow inlet, and the skipper had been at the wheel, using his searchlight to check out the distance to the shore. I didn't like that procedure, since one's eyes adjusted for the lighted area and didn't see the rest very well. As soon as he left the wheel house, I stuck my head out the wheel house window and got my eyes used to the dark. While concentrating very heavily on the uneven contours of the shoreline, the whole sky lit up with a brilliant green, prolonged flash — apparently a meteorite. I darned near rocketed out of the window in surprise. Naturally, my eyes were wide open when the flash occurred, so I got the full treatment from that event. It took a while for my pulse to slow down so that I could again enjoy the peace and quiet of plying a remote stretch of coastal water in that nearly uninhabited part of the B.C. coast. For the greater part of the time, all one hears in a late evening in those remote areas is the slow repetitive "thunking" of the reciprocating engine, the odd clink of a coffee mug, and the odd indistinguishable phrase uttered by someone below on the deck. It is indeed the perfect peace.

Crossing Millbank Sound and, later, Queen Charlotte Sound were not such relaxing experiences. The weather was borderline; and we did cross them without holding up. However, a pretty nervous Captain paced the deck and haunted the radio room with me as he assessed his chances of completing the crossings without losing some logs. We made it OK, and we dropped the tow finally near False Creek in Vancouver some 3 or 4 weeks after our initial departure from that beautiful city.

As soon as we had dropped the tow, we went to our company dock to load stores; and, in a matter of a few brief hours we were off to the Morgan camp again for another raft. We had a good crossing of Hecate Straits, and we put out trolling lines to see if any stray salmon were wandering about under that wide expanse of water. Sure enough, we caught a beautiful big sockeye salmon weighing about 25 or 30 lbs. Our meals for some time thereafter consisted of baked salmon, salmon steaks, salmon fillets, fish cakes; and, finally, fish chowder. Anyway, with no refrigeration in those days, that fresh fish was a nice change from meat.

We were tied up in a cove just north of Millbank Sound awaiting an easy of the wind and seas for its crossing. One day the Mate and the 2nd Engineer decided to try their luck at deer hunting; and they were kind (and also stupid) enough to take me along with them. I say that because with my inexperience, I am sure that any deer that may have been around were soon scared off with my awkward crashing through the bush. Anyway, we returned to the boat empty handed. Later that evening, I saw a little dug-out canoe approaching us, paddled by a bewhiskered but not old man. He was literally a hermit; and, having seen us with guns and no victims thereof, had decided that perhaps we would be willing to swap some of our meat for a big white goose he had brought along. The cook examined the bird with his practiced eye and decided that it would be a good trade, so the swap was made. I can't say that I was all that enthralled with the goose. However, it was a change of diet.

Eventually the skipper decided that conditions would permit us to make a dash across Millbank Sound, so off we went. It was the only time I saw him make a poor call. Suddenly, the wind picked up and was soon blowing a gale. We were sailing alongside of a small island that had a long narrow spit protruding out into the channel; and that island was to leeward of us. The wind was slowly blowing us and the tow toward the island, and it now was getting dark. The tug had passed the spit as the wind blew us well toward the island, so that the tow line started to slide over the spit. That was it!

We found ourselves in a small cove, and as the boat maneuvered about, the glow of phosphorous stirred up by the propeller lit up rock within inches of our keel. We could do nothing but put out the anchor and wait for daybreak. Meantime, the skipper was beside himself with guilt at the thought of the raft breaking up on the shore on the other side of the spit.

At daybreak, we found the tide out; and we were surrounded by a myriad of ugly big rocks. How in the world we had maneuvered around there on the previous evening without having our hull ripped open is beyond comprehension. To our great relief, we saw the raft on the shore but still intact. To boil that story down to its essence, we got the raft OK, and went on to Powell River with it as if nothing had ever happened.

Two other incidents come to mind in my towing experience, both of them on the SS Anyox. This boat got the towing contract from J. R. Morgan some time after the Lorne jobs. The Anyox had been idle for quite some time, so that the company was not in too good financial shape (who was in the dirty Thirties??). The boilers had needed attention, mainly by getting some boiler tubes shipped over from Poland. However, finances held this project up; and when the contract became available, it was the equivalent of "Damn the torpedoes", etc., etc.

An old friend of mine who was and still is a very active ham was courting my sister at this time, and he had designed and installed the radio equipment on the Anyox. Hence, he also became its operator when it was in service. At this time, he had another shore job going, and, besides, he was campaigning my sister, so he invited me to take his place on the boat. This time, it was under better conditions — good accommodations, just some re-

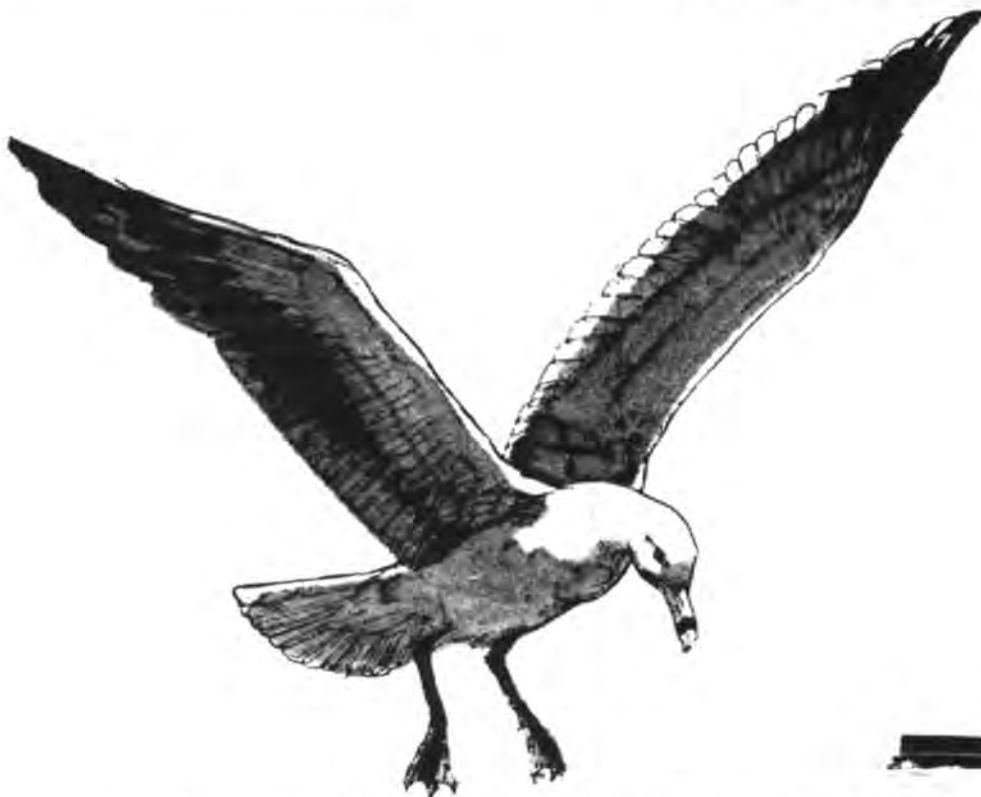
lief steering, and running a winch when we were working on lines and tackle during hook-up and release of the tow.

We hadn't been underway more than perhaps 3 hours when I heard a mighty hiss, and saw the engine and boiler room crew scrambling out onto the deck. Steam was all over the place. One of the boilers had blown a tube.

The boys had been so startled they just dashed away from the hot steam, and no one thought to shut off the fires and the steam. The Chief Engineer quickly tied a heaving line around his waist so that he could be recovered if necessary, and he made his way through the steam, heat and racket to shut off the steam and turn off the fires. In the meantime, we had anchored, since we were going to lose power very shortly. Then came the miserable and tedious job of extracting the blown tube from that hot boiler and inserting one of the few spares that we had on board. It wasn't very long before we had steam up again and continued underway. This happened again a couple of hours later; but thank goodness that was the last of that panic. On the second occasion, the boys knew what to do, so it wasn't the same schemozzle.

The other thing I remember about that ship is that my friend couldn't resist making the transmitter capable of operating on 40 metres. Operation from a ship wasn't permitted then, so I surprised some of my friends in Vancouver when I appeared on 40 with a weak signal (being shielded in narrow inlets or straights by high mountains on either side) using my own call (VESKQ). There was nothing very exotic to work at that time, since we were nearly always in poor locations for HF transmission.

Well, that's about it. This isn't in the same ball park as the Orient adventures and so on; but it seemed like a good idea to try to portray to you the differences in life on little tow boats as compared with that experienced on the bigger trans-Pacific jobs. Meantime, I will scrape down to the bottom of this frail old mind in an attempt to find some more recollections of happenings 50-odd years ago in the wireless world.



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The Fanning Island Story

BY C. CARTHEW

We are indebted to T. B. Condon for this story on his experiences at Fanning Island and permission to publish the article from the Overseas Telecommunication Association of Australia. Thanks to Charles W. F. Carthew, General Secretary.

Serving two terms of two years and more were experienced by me as a cableman on this atoll which comprises one of the Line Islands, 228 nautical miles north of the equator. Roughly oval, the island is 9.5 miles long by 6 miles wide with an area of 8,500 acres with the enclosed lagoon having an area of 42.6 square miles. The rim of the island is very low, made up of a beach crest, about 10 or 12 feet high, within which much of the land is only 2 or 3 feet above sea-level. The climate, although warm, is very uniform and healthy, with the temperature 83.5 (73 to 92) degrees F., modified by nearly continual trade winds. These blow from the southeast 45 percent, from the east 30 percent, and from the northeast 13 percent of the time. The annual rainfall is variable, but usually is between 80 and 100 inches, with as much as 124 inches.

Fanning was discovered by Captain Fanning in 1798 and since then various adventurers have called including the French, Captain Legoarant de Tromelin, whalers of many nationalities, and one Father Emmanuel Rougier, who had a hand in forming a copra company together with nearby Washington Island. This venture, due to the low price of copra, folded up and was subsequently sold to Burns Philp Co. Ltd., trading under the name of Fanning Island Plantations Limited. The island, known by the natives as "The place of the heavenly footstep," has a link with Tonga for Kenneth P. Emory, Bishop Museum anthropologist, describes (1934 and 1939) some ruins, adzes, a fishhook and other ethnological specimens found on Fanning. He concludes that the Island was populated by people from Tonga about the fifteenth century. A cable relay station was established in 1902. This breaks the stretch from Bamfield, Vancouver Island, Canada, to Suva, Fiji. It is worthy of note here that the Bamfield-Fanning span is the longest continuous cable length in the world, 3,458 nautical miles with soundings for a great part of the route from 2,800 to 3,400 fathoms. The Fanning-Suva span is 2,043 nautical miles. The soil is fertile and breadfruit, bananas, figs, pineapples, taro and arrowroot grow readily. Soil has been imported from Honolulu for vegetable gardens. One member of the staff, Harry Colliver from Adelaide, did have some success growing tomatoes successfully using the hydroponics method. Marine life is abundant along the reef and also in the lagoon. Land crabs are numerous, making burrows in the sand. It has been reported by a sober member of the staff that he witnessed a singlet disappear down a burrow? There are the usual sea and migratory birds, the latter chose Fanning as a stopping place on their flight from Alaska to points south. Giving them time to become fat, where they rested on the few lakes on the atoll, they proved to be a welcome change to the diet. It is interesting to note that a highly coloured parrakeet and a warbler also adopted Fanning as their home.

Fanning lies far from any of the regular tracks of ocean-going steamers but, in spite of its isolation and its restricted area, the station is not an unpopular one with the staff as the following experiences will endorse. Fanning has, through the years, been staffed by Australians, New Zealanders, Englishmen, while I can recall with pleasure four men from Norfolk Island. All combined to make a competent and worthy team. All were trained in their respective countries and were rigorously schooled both as operators and engineers. This thorough training was most necessary for messages of vital importance to Government and commercial interests alike passed through their hands. Errors were something to be avoided. Moreover until the advent of advanced technological knowledge, cable signals were unstable and experience and skill were needed to translate them correctly.



As at other cable stations, shift work was necessary and it took some twenty-five men to man this station, some were married, but the majority were single. Today with the advent of the relay, magnifier and other engineering skills, the personnel would be one quarter of this figure. Until 1931, the Union S.S. Co. freighters stopped with supplies.

Since then, however, the island has been supplied from Honolulu, the S.S. "Dickenson" making quarterly trips, captained by Captain Piltz. The "Doris Crane" also plied from San Francisco primarily to lift copra from Fanning and nearby Washington Island. We gladly welcomed this barquentine coming as she did between the trips of the Dickenson. Captained by the legendary McCullough, a typical Nova Scotian blue nose, with the green sea in the marrow of his bones. Great was the interest in this man who was in the mould of other sea dogs, tough but nevertheless kind. He told some rare stories of the sea, of shipmates and experiences in various ports of the world.

The "Crane" also brought much needed fresh food and although we always were adequately stocked, freshness was always appreciated. Merchandise too, particularly clothing, from the shelves of Sears Roebuck and Montgomery Ward were eagerly sought, after perusing the catalogues, which were presented in a most illuminating manner. Unlike the freighters from the Antipodes who made the station, Whalers Anchorage, their port of call, the "Crane" invariably berthed at English Harbour bordering the passage and the headquarters of the copra company. From this point the cargo was either brought to the cable station by whale boat, via the lagoon, or the ocean route, whichever one was suitable at the particular time. The lagoon did present difficulties in that coral outcrops exist and this made navigation hazardous as the passages are narrow and tortuous. However, handling and the unloading presented no difficulties as the labour was abundant and skillful and a system of tram rails minimised handling, conveying the cargo direct to its destination whether it be the Mess store or the refrigerated chambers. Most of the cargo was destined for these two points. It was indeed a revelation to see the Gilbertese handling the whale boats in the heavy surf and swell, manoeuvring to just the right time when the opening appeared, then letting the boat ride calmly through the opening to the haven of the quiet water and the beach beyond.

Harking back to comforts on the island, many were provided. They included radio, refrigeration, electric light (derived from Diesel generators), a doctor, tennis court, library, and even a branch of the New Zealand Post Office Savings Bank. Where would you in such a remote outpost find such a range of the comforts of modern living? I did mention labour. This was recruited from the Gilbert and Ellice group every two years and they were worthy types, both male and female, adept at handling boats as well as serving as policemen, servants and the general run of labour to be found on copra plantations.

One outstanding figure on Fanning was one Hughie Greig, a part Manihikian. About 1857, a whaling ship brought to Fanning an Yorkshire Scotsman, William Greig. A short time later he was joined by



an American, George Bicknell. Both married native islanders, Greig's wife being Teanau Atua (1842-1917), a sister of the King of Manihiki. Both men died on Fanning, Greig on July 27, 1892. The three sons of Greig remained on Fanning but the descendants of Bicknell gradually moved away. In September, 1914, the German cruiser "Nurnburg," slipped up to Fanning, flying the French flag. They landed and wrecked the cable station, cut the cable and destroyed a cache of spare instruments. No lives were taken nor prisoners. With the assistance of Hugh Greig who dived for the ends of the cable, communication was re-established within two weeks. This was a herculean task for there were no aids in those days to deep sea diving and for this effort Hugh received 20 pounds sterling as a bonus. Incredible! In all other respects Hugh was a man above men and when I think of him my whole being swells with pride at having known such a man.

It may be interesting to record the manner in which the officers at this lonely outpost of Empire occupied themselves after disaster had befallen them. They were completely isolated from any means of communication with the outside world and there was little prospect of early relief reaching them. The station had no equipment for handling and repairing cables, and there was no spare cable which could have been used for bridging the gap due to the dragging apart of the ends. Moreover, a mass of wreckage represented all that remained of the instruments and plant. However, ingenuity, courage and resource were forthcoming and this is the vital part wherein all were grateful to Hugh. Cable repair work is a specialised field but these men succeeded in buoing the ends to platforms contrived from planks and barrels and above this shark infested area successfully communicated with Suva, Fiji, by means of a piece of covered wire stretched between the severed ends. This was of course but a temporary measure. Just fancy an ordinary pickaxe being used as a grapnel? Much skillful work was also carried out by the staff in reconstructing instruments by piecing together serviceable parts from the debris of those damaged and preparing the Station for the permanent reopening of communication. A great feat.

Reverting to Hugh Greig. He was at one time a cableman living at English Harbour, a distance of some six miles, but made the trip either day or night by canoe for he knew the passages as the back of his hand. A typical attitude of him in handling the outrigger alone was to have the main sheet rope between toe and big toe, steer oar under his arm and smoking a cigar. Serene and unperturbed was he.

In the mention of stores earlier, I forgot liquor. We imported a large range of ale, whisky, gin and other such beverages as well as liqueurs as Cointreau, Benedictine, Cherry Brandy and others. At the request of one staff member, "Hairy" Hinton, we imported a cask of overproof Ballater whisky from Scotland and breaking down this potent fire water was exciting as experiments go. I can well remember my hangover after imbibing too freely of this "fire." From memory whisky was somewhere in the region of U.S. \$4.00 per bottle while other beverages were similarly priced. No duty in these golden days. This is a far cry from the exorbitant prices of today.

Dress about the station was informal with shorts and singlets predominating, and as a consequence in this wholesome atmosphere we all had a very healthy tan. For more formal occasions, however, we wore longs with bow tie while for lounging around our quarters we invariably wore a "sulu" which was so very comfortable.

We did have some experience of coral poisoning and this was a hazard we all took in our adventures about the island. We were, however, quick to obtain remedial measures which were usually effective. From time to time we had many medical men but the one whom I can recall with enthusiasm was Dr. O'Keefe from Sydney. This man, greying at the temples, aged over the three score years and ten, always took a very deep interest in the events of Fanning and the outside world. In the latter respect he always took a keen interest in the events leading to the outbreak of World War 2 and I can well remember his deep interest in the Austrian putsch, the subsequent events in the rise and fall of Hitler's Germany. He gave us all a tremendous boost in what would be the inevitable outcome. Retiring from Macquarie Street, Sydney, as a specialist, the Doc was very keen on his chess, walking and tennis, at all times keeping himself very fit. Everyone loved him and many are the words of wisdom that I devoured in my many walks with him. A freighter called requiring urgent medical attention to one of its crew members and the Doc duly obliged, performing the operation successfully. I can recall him telling me that he had not done this particular operation for some years and that he had to consult his books to refresh his memory. At all times he was extremely thorough. During the sports on New Year's Day, wherein we all took part, the Doc customarily seated himself on the verandah overlooking the finishing line to view proceedings with his usual aplomb. Seeing the children devouring icecream and lollies, which are so dear to the young

palate, he stroked his chin in his customary way and said, "Oh yes, castor oil tomorrow." My daughter Nancy had the misfortune to cut her instep rather badly on a broken bottle and the Doc, a strong believer in the healing qualities of ether, but knowing its sting, soothed Nancy by saying, "Here is some of that cold stuff, Nance, but it will make you better." He had a great way with all, particularly the children who congregated every morning at surgery hours wanting the Doc to put some "niggers blood" on their imaginary wounds. This was in fact plain Meurochrome. Great too was his belief in sunbathing before 9 a.m. and after 4 p.m. and he instilled into us the virtue of this. We were grateful and I feel that some uncomfortable sun burnt bodies were thus saved by this sage advice.

From time to time, we had visits from the Royal New Zealand Navy doing patrol work and keeping a watchful eye on Fanning and nearby British Possessions. American coastguard ships also made their appearance and these were all very welcome. Visits from pleasure yachts, although rare, did occur, and this afforded us with the chance to fraternise with other humans. Just before the outbreak of World War 2 we had a visit from a New Zealand cruiser and as a result we were blessed with a Lewis gun which we were told we had to man and protect ourselves from any enemy who had designs upon us. Just unbelievable. To further our defense technique, the old rifle range was re-opened and this proved to be enthusiastically received by the staff. We had some capable exponents, not perhaps up to Bisley standards, but nevertheless good. Fortunately our training in defense was never needed. One day before the outbreak of war, however, a small contingent of permanent staff personnel from New Zealand arrived for our protection and for this we were very thankful. They stayed for some time until eventually the defense of the island was handed over to the Americans who really got down to business transforming the island's defense, making roads and an airfield, besides other protective arrangements. These were anxious days but we boxed on keeping the communication links open. We fared a lot better than our counterparts in Singapore, Penang and other Far Eastern areas.

(Continued on Page 22)



Carthew - Fanning Island Story

A Look Back In Communications

(Continued from Page 21)

Cable ships also came from time to time mostly for repair work. A new cable was laid during my stay which caused some consternation until a new "balance" was established. Housing was very good, particularly the new concrete married ones which were constructed by a Sydney firm who also made alterations to the office itself. Verandahs, wide and spacious, were a feature with big airy rooms. The single men's quarters were good and built in three separate sections and such names as Snobs Alley, Posh Lane and the Bastards Retreat, gave them added significance. "Jumbo" Lorking, an Australian who had a keenness for fishing, had a room very easily found by the smell of stale bait and the noise of Cussy crabs, used for bait, crawling around in a biscuit tin. We, however, always welcomed Jumbo's catch which, together with others, was always "spot on."

The library was excellent with a wide international range including the English Tattler, Sporting Dramatic, Sydney Bulletin and the New Zealand Weekly News. Reading was well catered for. The standard billiard table was very popular and filled in a very much needed diversion. Some of the exponents were very good and from time to time we held tournaments. The tennis court had its fair share of adherents too and painted green to minimise the glare on the concrete base proved easy on the eyes. Tournaments were held from time to time and I can well remember one final between Bill Christian and Tom Bailey, both Norfolk Island men, wherein Syd Morris acted as "second" complete with towel and bucket and sitting in the corner as in a boxing match. Great days, yes sir, indeed.

Vivid is my memory of one Cockney Chandler. Chan was the handyman attending to various jobs which embrace this position and, true to his London upbringing, possessed a ready wit and succeeded in placing his h's and a's in the wrong place. On one occasion the Superintendent had trouble with his septic tank and Chan was called in to rectify the trouble. His diagnosis was that it was due to the "hair in the pipe not the 'air on your 'ead but the hatmosphere." He also related that he had a brother in London who was a "hegger" and when questioned as to what this profession was, said that it was a man "who 'awk-ed heggs." Chan made an outrigger canoe, quite a feat in itself, all bound and without a nail in its construction. When we

had the launching ceremony and as the craft slipped into the still waters of the lagoon, Chan remarked "there she goes and she won't leak a 'heggcup' full." Chan added a lot of humour to the island life and with his one solitary tooth looked a fearsome customer but was in fact a very human and kindly man. What a far cry to be posted to Fanning after his native London.

I wonder what happened to the Piscatorial record of the various species of fish caught, their weight and whether caught in the lagoon or ocean. Fishing was always good but at times the lagoon became foul and gave off a very offensive smell. We avoided fishing there at this time. The ocean side produced some beautiful fish, fresh and juicy, and Mulletteer was a popular variety.

Illness was rare and colds or any of the many virus infections known to city folk were not present at Fanning. Mosquitoes were troublesome, at times, but sleeping in a bed with a covered net kept them at bay. Insecticides were not known but joss sticks were found to be helpful. Temperaments were varied and although there was the odd flare up life went pleasantly on. On one occasion, the Royal Mail Steamer "Niagara" was diverted from the Vancouver-Suva run to pick up an Army man who had shown some inconsistency and as the war had taken an adverse turn I thought it desirable that my wife and two children would be safer in their home in Auckland. Plying slowly up and down with the five knot current to contend with, Captain Todd handled the big craft skillfully and as the whale boat drew alongside the four passengers were hoisted aboard by means of a bosun's chair. During this dramatic event as evening fell, the passengers crammed the rails of the liner taking photos of something that was not on their itinerary. Once more tribute must be paid to the Gilbertese boatmen who handled the whalers with dexterity in the current and swell which was quite considerable. Accompanying the passengers out were the Manager and other dignitaries who had business to attend to aboard but we did not reckon on their return being loaded with goodies as lamb, sponge cake and other eats dear to the palate. As it was now becoming dark, I joined this group in their whale boat and as we passed through the passage, now in a deep swell, I, being aft, could hear them dividing the spoils without any concern for me or my colleagues ashore. I therefore, quite legitimately I think, secreted a leg of lamb and some cookies under my seat and when we grounded on the beach I made off to a familiar spot and deposited same. Picking them up later I conveyed them to the mess. At this time I was the Manager's clerk and the next morning I was questioned as to whether or not I had seen the lamb and goodies. Innocently I replied, "surely no - were there some?" Naturally this episode caused quite some amusement from the rest of the staff.



In the early days, about 1914, there was a tragedy on the island when the then Japanese cook, Yamma Gouchi, becoming depressed, was found hanged to a tree on the lagoon side. There is a passage between the ocean and the lagoon and a current of some five knots flows either way with the tide and it was in this rip that three staff members, Doug Passmore, Izzy Towner and Charles Bennie, having canoe trouble, were swept clear of the island and out, alone, in the vast Pacific ocean. However, one Japanese fisherman, Harada, employed by the copra company, was fishing on the bank of the passage and in the gathering gloom noticed a glint on the water which was in fact the glasses of Towner. Then detecting a voice calling for help, he tore up to the launch ramp and enlisting the help of Hughie Greig who had the launch through the passage in short time and, being familiar with the current, located the lads by this time well on their way to places beyond the horizon. This was indeed a very, very lucky break. Incidentally Doug is now retired in Sydney having made his mark as a Doctor of Medicine in New South Wales. His hobby is breeding horses in which field he has shown considerable skill. The others have settled down in retirement in various parts of the world.

On two occasions I walked around the island with other colleagues staying at different huts built for the copra employees during the "cutting" season. This was indeed a treat and I can recall these two adventures with pride. You did seem to be so very far away from everything around that coast line. Walks along the "trails" were plenty, mostly bordering or deviating from the lagoon. During these excursions, one often heard the swish of a coconut falling but to my knowledge, no one has ever been struck by one. However, there must have been some very near misses. Can you imagine the excitement on boat day, after three months, with fresh stores, mail and a change in personnel. At times for various reasons the boat was late and we had to subsist on fish and rice but these occasions were rare but we always measured up to any eventuality. The staff mess was run, in the first instance, by Gilbertese and latterly by Chinese under our supervision. These Chinese were indentured from Hong Kong and were very efficient both as cooks, servants and labour generally. They were very clean. However, you could get nowhere with them when it came to any dispute, their inscrutable nature was really something. On one occasion during World War 2, Stuart Macdonald of Adelaide and myself were the only two in the mess and for one month we endeavoured to live as cheaply as possible. We managed on three dollars each which was really cheap living. Our fare was naturally fish. We all lived great lives but at Fanning it was something extra.

It would be impossible to portray all that happened at Fanning during the years since 1902 but each year as I cast my eyes around the room at the reunion in Auckland, and I well know that this exists elsewhere whether it be London, Sydney, Darwin or Singapore, I think of all those great blokes, some now passed on to the Great Beyond, who have graced that Island of the sun. For those able to relive it all again is really something and perhaps the same old stories have had added embellishments but nevertheless it was a great experience and life. They followed a very noble calling, they kept together, they had their differences but they were men to let that pass over their heads and become noble and grand with memories that will never be effaced from the book of time. God bless them all.

I'd dearly love to walk those trails again, to fish the lagoon and the ocean side, yes to walk around the isle once more and feel the aloneness far away from the rush, tension and smog of modern living. Thankful am I that I am able to record these pages of an epic experience. Rupert Brooke puts it concisely when he says, "If ever you miss me suddenly, you'll know I've got sick for the full moon on those little thatched roofs, and the palms against the morning."



"THE AIRPLANE COMETH!"

20,000 Leagues (and more) Under the Sea

By Charles W. F. Carthew

We are indebted to "Brax" Horrocks, the President of the South Australian Veterans' Association, for the following article on cable laying. A lot of it will no doubt be old hat to the old and bold cable people, but I am sure that many of the wireless people will be very interested in the article.

It is hard to realize that it is only about 120 years since the first attempt was made to speak telegraphically the seas. Before that all messages, even from England to France had to be sent by ship or carrier pigeon; the former method being slow and the latter more than somewhat uncertain.

It was in 1850 that the first submarine cable of any length was laid. It consisted of a single, gutta-percha covered copper conductor with no protecting armour and it was successful in that congratulatory messages were exchanged over it before a fault developed which could not be located. In the following year a cable sheathed in hemp and iron was laid over the same route and this was followed by others connecting England with Holland and with Ireland. The success of these experiments proved the practicability of submarine telegraphy over short distances, but it was the finally successful laying of the cable from England to Newfoundland by the huge four-funnel paddle-wheel steamer "Great Eastern" which demonstrated the immense possibilities of this new wonder.

Much activity followed, and by 1872 cables had been laid through the Mediterranean to India and beyond, southward to the Cape and across the Atlantic to South America. From Singapore they extended to Java and then to Darwin where they were connected with the new Overland Telegraph from Adelaide which, in spite of tremendous difficulties, had been completed in less than two years. On November 15th 1872, the first message reached Sydney from London having been relayed no less than 18 times en route.

Thirty years later a cable chain across the Indian Ocean from Durban to Rodriguez and Cocos to Perth was completed and a year later the Pacific was spanned from Vancouver through Fanning, Suva and Auckland to Southport in Queensland.

If a fault or break develops in a cable its location is calculated by careful testing at the two terminal stations. The electrical resistance is measured from both ends, the "behaviour" of the fault or break under various values of testing current is observed. Much experience and considerable skill is required to access the equivalent ohmic values of the many variables. Both faults and breaks give different and quickly varying results with negative or positive to line, for instance, negative to line will "clean" the end whereas positive will cause sulphation and therefore indicate a slow increase in resistance. And there are other variables such as the strength and direction of earth currents which have to be calculated in equivalent ohms and taken into consideration. Then having taken tests of various kinds, depending on whether it is a fault or a break, and knowing from records the ohmic value of each nautical mile of cable, it is possible to determine the whereabouts of the trouble. These days the testing results by the two shore stations are of course communicated to each other and to the ship by wireless, but in the early days of submarine telegraphy, these results had to be sent by other routes, usually necessitating transit around the world.

Accurate localisation of a break or fault is essential since the repair ship's course is planned on the results obtained. When the position of a fault or break has been determined, the ship goes to the area and sights are taken to ascertain the exact geographical position. A marking buoy is put down to form the base from which subsequent operations are measured. "Fishing" for the cable calls for skillful navigation and much patience. The choice of the right type of grapnel is important; if the bottom is muddy or sandy a sliding prong rigid grapnel is used, the prongs digging into the bottom in search of the cable. Where the cable is known to lie on hard rock, rounded prongs are used, these being jolted together in chain fashion and free to turn as they travel over the sea-bed in a snake like manner.

When the cable is hooked the ship is stopped and the grapnel rope carefully wound in, it being important that there should be no undue strain. When clear of the sea, the cable is cut and each end is brought on board in turn and tested to the shore station. The "good" end is then buoyed and the ship picks up the other section towards the fault which immediately it leaves the water discloses the fact on the ship's galvanometer. The fault is cut out and the remaining cable tested. New cable is then spliced on and the ship pays out to the buoyed end which is brought aboard, spliced to the new section and finally lowered into the sea.

With modern cables, surprisingly little repair work is necessary as special sheathing is provided on those sections which are subject to chafing or strong tidal flow. Cable which lies in the deeper parts of the ocean rarely gives trouble.

Cable laying and cable repair work is skilled, arduous, and often fascinating - for instance, one needs no vivid imagination to appreciate the poignancy of the hour when the final splice is made in a cable linking continents for the first time; and one can appreciate the bewilderment of the ship's crew, some many years ago, who, having been ordered to repair an apparent break in a cable near the China coast, found that the cable had been cut with a saw and several miles "pilfered" probably for the value of the copper and sheathing wires.

Improvements in cable manufacture were constantly being made and many routes were soon duplicated with latest type inductively loaded cables. By 1926 350,000 miles of cable were serving the Empire and foreign countries, a very large proportion being owned by British interests. Meanwhile great improvements were being made in operating technique, and with the introduction of a regenerator system at about that time, fully automatic relay and greatly increased speed and accuracy of signalling was achieved so that it was possible to send messages direct from London as far as Adelaide and Hong Kong.

Special ships were built for the laying and repair of submarine cables. New cable is carried in huge circular tanks and coiled to permit freedom in paying out as the ship proceeds over its previously chartered route. The speed of laying depends on many variables including the weather, but is usually at about 8 knots. Complete data is comprehensive and includes the types of cable laid, the positions of joints, ocean depths, a description of the bottom, sea temperatures, and other relevant details.

Page From Diary of a Pioneer Radio Operator

BY C. CARTEW

In the early 1920's, we called at Derby, Nor-West coast of Western Australia, to take on cattle for export to Singapore.

This consignment of livestock had been driven overland and expertly loaded by stockmen into the holds of our ship . . . an interesting test of endurance of man over beast and an insight into the primitive state if the use of strong language be any criterion.

The cargo safely aboard, no time was lost leaving on high tide for the open sea.

A few days out in the Indian Ocean brought tragedy both unprecedented and spectacular. One by one the livestock succumbed either to tropical heat or disease . . . possibly a combination of both.

The steam winches guided derricks in the lifting and releasing of one beast after another and immediately a carcass reached the water sharks came in droves to partake of an unusual feast; if denied access they turned on one another and added to the dreadful carnage.

Worse was to follow for, without warning, flies in their millions appeared from nowhere and literally blackened the ship. Mosquito netting, cheese cloth and other material was improvised to obtain some measure of protection during meal hours and rest periods.

The patience of officers and crew alike was sorely tried until arrival off Singapore when two days of quarantine eventually brought conditions back to normal. Incidentally, sulphur used during the clean-up process played havoc with the gleaming brass instruments in the wireless cabin. Life on a cargo vessel is certainly not without incident.



The Scorching Tropical Sun

Pirates of the China Seas

by DR. A. D. BLUE, M.I. MAR. E., B.Phil.

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Piracy has always been a menace to seaborne trade and persisted longer in Chinese waters than elsewhere because of several factors. These included almost endemic poverty, the absence of a strong central government and, arising from this, of an effective navy. This article looks at some instances of piracy in the China Seas

WHEN the first European ships arrived on the China coast in the late 16th century, many of the pirates were Japanese, and because of this the Ming Emperors banned all intercourse between the two countries. This afforded the Portuguese, the pioneers of Western trade, the opportunity to help in pirate suppression, and so obtain valuable trading concessions.

Western trade originated in the estuary of the Canton River, and many of the pirates were fishermen, who seized any opportunity of plundering foreign sailing ships becalmed in coastal waters. The well-armed East Indians were comparatively immune from piracy, and it was the smaller country ships which suffered most from the fleets of fishermen-cum-pirates. The Cantonese were more xenophobic than other Chinese, and an early Governor of Hong Kong described them as "the most enterprising and cruel pirates on the coast, and the best informed as to the movements of European vessels."

The first Anglo-Chinese War of 1839-42, often called the Opium War, led to the treaty port system. Canton, Amoy, Foochow, and Shanghai became treaty ports, and the island of Hong Kong a British Crown Colony. At the same time the first steamships appeared on the China coast, and after the Royal Navy had inflicted heavy losses on pirate fleets, a new style of piracy emerged to meet the changed conditions.

Foreign coasters became very popular with the Chinese, and the new pirates boarded as passengers with their arms concealed in their baggage, and at a convenient time and place attacked bridge and engine room and took command of the ship. Their objective was to rob the passengers and perhaps carry off the wealthiest for ransom, and loot the ship of any valuable cargo. For this reason most piracies took place in the Canton River or estuary, or near the coast, so that the pirates could escape in the ship's lifeboats or in friendly junks.

One of the earliest piracies of this kind took place in 1874, when the small river steamer *Spark*, carrying 150 passengers, was pirated between Canton and Macao. The European captain-mate, and purser, and one Chinese fireman were killed, and after robbing the passengers the pirates went ashore in the ship's boat. The engineers, who had prudently taken refuge in the stokehold, then took the steamer to Macao.

Most China coasters carried passengers, and in the emigrant trades to South East Asia, which reached a peak after the First World War, the largest coasters could carry almost 2,000 deck passengers. Ships returning to South China with hundreds of returning Chinese were the most attractive to the pirates, by this time well organised and well informed. Many northbound passengers were returning to retire or for a holiday, and would have their savings of many years of work with them.

The pirates' strategy was to get control of such a ship just before she reached her destination, plunder passengers and ship, and make off inland either in the ship's boats, or in friendly junks which had rendezvoused at the appointed place.

Sometimes a few wealthy Chinese would also be taken for ransom. Bias Bay, just outside, and Mirs Bay just inside, Hong Kong territorial waters were the most notorious pirate haunts. Such piracies required careful planning and organisation, and often some of the pirates would travel previously on the ship to become acquainted with its routine and layout.

It was essential that the piracy took place as near Bias and Mirs Bay as possible, to reduce the time the ship

was under pirate control, and out of communication with naval headquarters in Hong Kong. A meal time was often chosen for the simultaneous attack on bridge, engine room, radio room, and saloon, when the officers not on duty would be conveniently congregated in the saloon.

During the treaty port century, there was seldom a year without several piracies, many of small Chinese vessels not being reported in the English language press in Hong Kong or Shanghai. The determining factors were the ability of the Chinese authorities to operate anti-piracy measures and co-operate with the Royal Navy, and corresponding action by the Hong Kong Government and the shipping companies. The Hong Kong Government and the Royal Navy had many difficult problems with which to contend, and the former passed the first of many anti-piracy ordinances in 1847.

The Navy could attack pirates anywhere on the high seas, and commit them for trial in any British or Chinese court. Piracy on the coast and rivers, however, outside Hong Kong's territorial waters was a Chinese responsibility, and the Navy could not operate there without Chinese permission. Anglo-Chinese co-operation, therefore, was essential, and was often not available, especially during civil wars and in the war lord era after the revolution of 1911. On the several occasions when the Navy took the law into its own hands, and attacked pirates and pirate bases in Chinese territory and in Chinese waters, Anglo-Chinese relations became seriously strained.

Among the anti-piracy measures adopted by the shipping companies were: carrying armed guards, arming the ships' officers, providing steel grilles around saloon and officers' accommodation, and screening Chinese passengers and searching their baggage when they boarded. The armed guards included Sikhs, Indians, Chinese policemen, and British marines and soldiers. The latter were provided from the Hong Kong garrison for a short time after the *Anking* piracy of 1928, probably the most famous of the inter-war piracies. When the British Government refused to defray the cost of guards of British soldiers, the shipping companies resorted to Chinese policemen under a White Russian sergeant.

From the beginning of the treaty port era, the Royal Navy bore the main responsibility for the protection of shipping in Chinese waters, a natural result of British trade and shipping far surpassing that of any other country.

The United States and French navies never had sufficient strength in the Far East to bear more than a token share. From the 1860s, in addition to the major base at Hong Kong where there was up-to-date naval dockyard, there were permanent squadrons on the Yangtze and West Rivers. The former had its main base at Shanghai, with a subsidiary base 600 miles up river at Hankow, while the West River squadron was based at Hong Kong, all coming under the overall command of the commander-in-chief of British naval forces at Hong Kong.

After the pitched battles of the 1840s and 50s, the Navy rarely came into direct contact with pirates. One notable instance was in the *Irene* piracy of 1926, which will be described later. The major Anglo-Chinese naval confrontations since the First Anglo-Chinese War occurred at Wansien on the Upper Yangtze in 1926, and at Hankow on the Lower Yangtze in 1927. Both of these resulted from war lord disruption and the civil wars which preceded the establishment of the Nationalist regime, and had no connection with piracy.

Piracy waxed and waned with political stability, and there was an increase in the troubled years following the revolution of 1911, just preceding the First World War. Most piracies took place in the South China Sea and in the Canton River estuary. In 1911 the British West River steamer *Shui On* ran aground at Kongmoon between Hong Kong and the West River, and was immediately attacked by several pirate junks, and her British chief officer and several Chinese sailors killed. Following this British river services were suspended for some time, and anti-piracy measures tightened. Then in 1913 and 1914 the British river steamer *Tai On* was pirated in the same neighbourhood, becoming the first British China coaster to be pirated twice. On the first occasion she was attacked several hours after leaving Hong Kong, and after robbing crew and passengers of money and valuables worth over \$25,000, she was run ashore and the pirates escaped inland. The *Tai On* suffered little damage and was towed off the next day.

The second piracy however just over a year later had much more tragic consequences. The pirates attacked the bridge which was protected by a steel grille, but were repulsed by the captain, chief officer, chief engineer, and two Portuguese guards. When threats failed to persuade the captain to surrender, the frustrated pirates set the ship on fire in several places, and began firing indiscriminately into the mass of panic-stricken deck passengers.

Distress signals had been sent off at the beginning of the attack, and other steamers, including the *Shui On* and a Chinese Customs launch were soon on the scene. By this time however the *Tai On* was completely out of control. Fires were burning fiercely in several places, dynamo and steering gear were out of action, and it was decided to abandon ship. The several fires had made the lifeboats and life rafts inaccessible, and men, women, and children were jumping into the sea. The captain and chief officer were picked up by another ship's lifeboat, but the chief engineer was never seen again, and a similar fate befell many Chinese passengers and crew.

On March 13, six weeks before the second *Tai On* piracy, the Norwegian steamer *Childar* was pirated soon after leaving Hong Kong for Swatow. Like the first *Tai On* piracy, there were no casualties on this occasion, and the pirates escaped ashore with a considerable haul of money and valuables. In the official enquiry following these 1914 piracies, the Hong Kong Government discovered that many anti-piracy precautions were not being observed, in particular those governing the searching of passengers and baggage. Co-operation between Hong Kong and the Canton administration however resulted in nine of the *Childar* pirates and 17 of the *Tai On* pirates being captured in Canton, and all 26 were executed there.

There was a lull in piracy during the First World War, the Canton Government of the time being unusually efficient; but a few years after the war, when the war lord era began in earnest, there was a dramatic revival, the worst years being 1922, 1926, 1927 and 1928. Only the most important and tragic cases can be described here. H.M. submarine *L4*, challenged the Chinese *Irene* entering Bias Bay without lights and in suspicious circumstances, and when she further ignored a warning shot across her bows and then a live round, she was struck midships on the waterline.

The captain had been navigating under the pirates' orders, and was too late in stopping the engines. The engines were disabled, and a fire

FOREIGN ENCROACHMENT ON CHINA

THE TREATY PORTS

- Canton—The original 5 ports opened in 1842-1844
- Tientsin—The 9 additional ports opened in the 1860s
- Aigun—ports opened by 1911 (the names of some are omitted on this map)

FOREIGN LEASED AREAS, 1898

- Port Arthur and Liaotung Peninsula (Kwantung) (Russian)
- Weihaiwei (British) To Japan after 1905
- Kiaochow (German)
- Kowloon New Territories (British)
- Kwang-chow-wan (French)

NEUTRAL ZONES



started which almost gutted the *Irene* before she sank. The *L4* went alongside, and rescued all but 28 of the 248 passengers. Three other British warships and the Hong Kong tug *Alliance* were soon on the scene, but were unable to prevent the *Irene* from sinking.

When the *L4* arrived at Hong Kong all the Chinese from the *Irene* were screened, and three identified as pirates. Then a few days later another seven were arrested in Hong Kong, and all 10 eventually hanged. Before this however they made a sensational attempt to escape from Hong Kong's Victoria gaol.

This case was a political cause celebre. The *Irene* was owned by the China Merchants Steam Navigation Company, controlled by the Chinese Government and considered the *L4*'s action as flagrant aggression, and disregard of international law. An action was brought against the *L4*'s commander in the International Court, but was unsuccessful, and the case had several unsavoury features.

The China Navigation Company's *Sunning* had been pirated in 1923, in what was a comparatively uneventful case. She was pirated for a second time a month after the *Irene* case, in what was one of the most dramatic piracies ever to take place on the China coast. The piracy took place when approaching Bias Bay, and shortly afterwards the ship's officers successfully recaptured the ship. When they refused the pirates an armistice, the latter set the ship on fire, which the officers countered by turning the ship into the wind and smoking the pirates out, and forcing them to leave in a lifeboat.

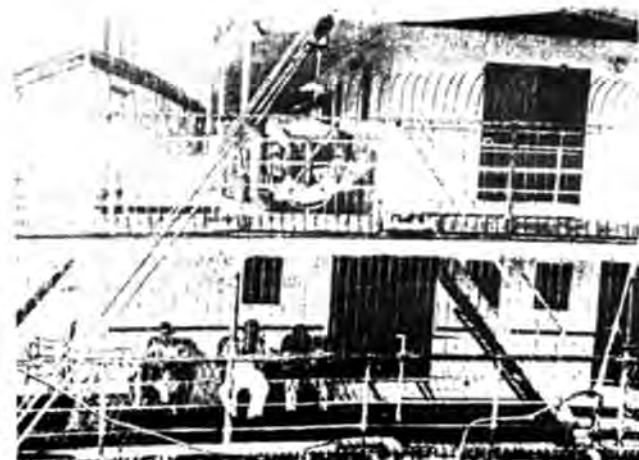
The crew however failed to get the ship under control, and were forced to

follow suit, and were picked up by a Norwegian steamer, H.M.S. *Verity* then arrived from Hong Kong, and the *Sunning*'s crew returned to their ship with a naval party, and succeeded in putting the fire out, after which the *Sunning* was towed to Hong Kong. It was definitely established in this case, that the pirates had boarded in Amoy, 285 miles North of Hong Kong, and that their weapons had been smuggled on board by stevedores.

In the following year occurred what was the most audacious piracy of modern times, when the steam launch *Wo Fat Shing* was pirated in Hong Kong harbour itself, the headquarters of the anti-piracy forces. On this occasion \$30,000 in gold bars was stolen. In the same year of 1927 the Jardine steamer *Hopsang* was pirated near Bias Bay, and in exasperation the Royal Navy sent an expedition into the bay, and destroyed two villages known to harbour pirates, and 40 junks and sampans.

The raid had been no surprise, and ample evidence was found that the villages had been implicated in recent piracies, but it caused only a temporary lull in piracies. The British and Hong Kong press made a great play out of all this. Highly-coloured stories were published of pirate companies organised on commercial lines, some with attractive Chinese ladies in command.

What was probably the most successful and tragic piracy of modern times was that of the China Navigation Company's *Anking* in 1928. The *Anking* was employed in the emigrant trade between South China and Singapore, and was returning with about 1,000 passengers when approaching Bias Bay. Her passengers were either returning home for a holiday or to retire, and all had money and valuables. In the attack the chief



Anti-piracy grille on board the Steamer "Antung" in the early 1930s.

Paradise Isle Lost in the South Pacific

BY PROF. HERBERT J. SCOTT

At one time in my seagoing days, I was the radio operator on a Norwegian tramp freighter, the only non-Norwegian aboard. As you know, a tramp freighter is a nomad of the sea, wandering over the oceans of the world from one port to another as the cargo loaded at the last port of call dictates.

We were on our way from Calcutta to New Orleans with a cargo of jute, and we had just arrived at the intersection of the equator and the 180th meridian. It was here that we encountered the one combination of elements most feared by sailors on the high seas.

It happened, unfortunately for us, that a simoon, a typhoon, and a monsoon collided head on, and in so doing, produced the most terrifying of all tropical storms, a six-sided revolving twister known as a hexacyclic tornado!

Soon we were in the midst of water spouts like trees in a forest, and we were unmercifully bombarded by nature's artillery of hail stones almost the size of bowling balls.

The gigantic seas nearly tore the ship asunder. At one moment we were propelled like a cannon ball to the terrifying heights of the crest of a wave, and the next moment with a sickening rush like a ride on a roller coaster, we would plunge into the abysmal depths of the trough between two waves. This continued for three days and four nights.

Finally we emerged into calmer seas and sunshine, and could now assess our damage. The raging sea had washed overboard, along with many other things, our binnacle, our chronometer, and our hydrometer. The only navigational instruments remaining aboard were a jackass quadrant, a nadir, and a table of sperical trigonometric coordinates.

Having been blown far off course by this terrifying storm, and being badly in need of fresh water, we headed for a small island just visible, low down on the horizon. We dropped anchor in the most beautiful lagoon. The water of the lagoon was a marvelous blue, and myriads of colorful tropical fish could be seen swimming around.

During our exploration of the island, we found not only fresh water in great abundance, but also some of the most unusual flora and fauna, the likes of which seemed to exist nowhere else in the world.

There were a large number of most unusual birds. The skipper, an excellent amateur naturalist, classified them as pyramido bioptic sea parrots, an odd but thoroughly descriptive name.

The term 'pyramido' comes from the fact that its eggs are shaped like a pyramid, rather than being of conventional ovate form; and 'bioptic' because its eyes, instead of being on either side of its head, were placed one in front and one in back.

Because of this positioning of its eyes, its natural enemies are unable to sneak up behind it undetected. Also, while in flight, the pyramido-byoptic sea parrot can, by the simple expedient of closing its front eye and opening its back one, see where it has been, and then, by reversing the process, can look where it is going.

Amongst the flora on the island was the Pinaya tree, the fruit of which was a cross between a pineapple and a papaya. There was also a great abundance of bread fruit trees, just loaded with wonderful loaves waiting to be picked.

The time came much too soon to leave this enchanting island paradise, and finally on a Saturday morning, on the 31st of November, 1921, we upped anchor and sailed out of the lagoon.

The remainder of the trip was without incident and, in due time, we passed through the Panama Canal, continued through the Caribbean to New Orleans, and unloaded our cargo, then, with the storm damage repaired, we loaded a cargo for our next port of call. . . .

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China Navigation Company's steamer "Wantung" and H.M.S. "Woodcock" in Windbox Gorge, Yangtze River

The *Shuntien* case also had political implications. Like the *Nanchang* she was a China Navigation Company ship, and making only her second voyage at the time. She was attacked by 30 pirates — who had boarded as passengers — soon after leaving Tientsin for Chefoo, again outside the pirates' usual range of operations. She was beached unharmed at the mouth of the Yellow River, and the pirates — who were professional smugglers — went inland with five European and 20 wealthy Chinese passengers as hostages. They told the ship's comadore that the piracy was a reprisal for the Chinese Maritime Customs having stationed an extra customs cruiser in Shantung Bay, and harming their business activities. The Europeans were released a few days later unharmed, but nothing more was ever heard of the unfortunate Chinese.

This was the last major piracy until after the war, and one can assume that as the Sino-Japanese War merged into the Second World War many pirates turned to smuggling arms and supplies to Free China through the Japanese blockade, assuming the role of patriots as they had so often done in the past. There had been 51 major piracies on the coast in the inter-war years. The great majority involved British ships, and 20 British Merchant Navy officers were killed, and several decorated for gallantry. There were also innumerable cases involving Chinese launches and junks, which received little attention in the English press.

In the disturbed state of China after the war, and until the Communists gained complete control over the country, with the exception of Taiwan, there were three piracies involving foreign ships, of which the first in 1947 was the most notable. The Dutch *Van Heutz* of 4,500 tons, repatriating 1,600 Chinese from Indonesia back to China, was the largest vessel ever to be pirated. She had called at Hong Kong to refuel and re-provision en route to Amoy and Swatow, and was taken over just four hours after leaving Hong Kong.

It was a piracy in the classic tradition, the pirates having boarded as passengers, and the ship taken to Bias Bay, where they went ashore in commandeered junks with six wealthy Chinese passengers and well over \$10,000 in cash and valuables. The pirates' intelligence was proven by the fact that on her previous voyage similar nature, the *Van Heutz* had carried a guard of 13 Dutch policemen.

The other two piracies occurred in 1952, and involved the British steamers *Wing Sang* and *Hupeh*, of the Indo-China Steam Navigation and the China Steam Navigation Companies respectively. The former was boarded from a heavily-armed junk

when passing through the Straits of Formosa on February 22, and Capt Stanton and an American diplomat passenger held for ransom, but released a short time later, when the ship paid over the equivalent of US \$10,000. Three months later the Nationalist authorities in Taiwan announced that the pirate chief had been captured and executed.

Then in December the equally innocuous piracy of the *Hupeh* occurred, in this case off the Chusan Islands on a voyage from Tientsin to Hong Kong. After being fired on from an armed junk the *Hupeh* was ordered to stop and was then boarded by 28 pirates who took control of bridge and engine room. A radio message had been sent off just before boarding, and received by H.M.N.Z.S. *Rotioti*, which arrived some seven hours later.

The pirates had ordered Capt Selwyn-Jones to take the *Hupeh* to one of the Chusan Islands, but when the *Rotioti* threatened to board, the *Hupeh* was ordered to signal the *Rotioti* that any such attempt would be followed by bloodshed. After an exchange of signals the pirates were guaranteed their freedom, on their assurance that passengers and crew were unharmed. In the outcome, the *Hupeh* went to Tungchu Island where the pirates went ashore. During the time they were in control of the *Hupeh* they had behaved well and done little looting.

For several years after the Communist victory in 1949, the greatest danger to British ships on the coast came from Chinese Communist or Chinese Nationalist armed junks or warships, or from guerillas working for both sides. Each side was motivated by blockade of the other's territory, and most incidents occurred during the Korean War of 1952-53, when Anglo-Chinese relations were at a very low ebb.

On February 16, 1954, it was stated in the House of Commons that in the previous 18 months, British ships on

the China coast had been interfered with on 40 occasions, most inspired by Nationalist blockade of mainland China. On several occasions the Nationalist Government of Taiwan admitted responsibility, and paid damages. All cases involved vessels trading on the coast, and not British overseas vessels.

One serious case involved the *Rosita*, a Hong Kong registered vessel of 709 tons. On December 1, 1952 she was fired on by a Nationalist gunboat off Foochow, and Capt Adams — on the bridge at the time — killed. The *Rosita* was then boarded by Nationalist soldiers who took control, and headed for Matsu Island. When they found that the captain had been killed however they recalled the gunboat and left the ship, which was taken to Hong Kong by the chief officer.

A much more serious cause causing greater loss of life occurred almost a year later, when a British naval launch on routine patrol in international waters south of the Pearl River estuary, was fired on by an unidentified Chinese naval craft. Seven of the 14-man crew were killed, another five wounded, and the launch severely damaged; but was able to return to Hong Kong unaided.

It was almost 10 years later after the Chinese People's Republic was formally established on October 1, 1949, that such incidents finally came to an end. For a further few years however British officers and seamen were sometimes subjected to humiliating treatment in Chinese Communist ports. British ships rarely call at the smaller Chinese ports now, and so far as British ships are concerned the China coast trade is over. British ships which call at Canton, Shanghai, Dairen, and Hsinking nowadays, are engaged in overseas, and not in domestic, trade. This may well be the final chapter in the saga of British shipping in the China Seas, which began when the first East Indiamen traded at Canton towards the end of the 17th century.

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Strange Weather Phenomenon "Whiteouts - Arctic Haze" Etc.

WHITE OUTS

This is an atmospheric optical phenomenon (sometimes called "Milky weather") of the polar regions in which the observer appears to be engulfed in a uniformly white glow. Neither shadows, horizon, nor clouds are discernible; sense of depth and orientation is lost; only very dark, nearby objects can be seen.

Whiteouts occur over an unbroken snow cover and beneath a uniformly overcast sky, when, with the aid of the snowblink effect, the light from the sky is about equal to that from the snow surface. Blowing snow may be an additional cause. This phenomenon is experienced in the air as well as on the ground. Former operators of the WAMCATS, CAA'ERS, and those in the aviation business in Alaska and far north are very familiar with this rather unique weather condition which makes travel almost impossible. WAB.

BERING SEA ICE STUDIES

Ice behavior in Alaska's Bering Sea, an area of extensive commercial fishing, and expected heavily increasing oil-related activities, will be studied by NOAA scientists. During February 1983, oceanographers and meteorologists will investigate the movement and break-up of pack ice, prior to developing a theoretical computer model for use in forecasting changes in ice position.

The results will apply directly to the design and placement of offshore oil rigs in the Bering Sea, prediction of safe routes for tankers and resupply craft transporting oil and supplies across the area, and activities of vessels involved in the \$570 million-a-year fishing industry in the Bering Sea.

The Bering Sea ice edge continually advances into, and retreats from, the open water. To develop an accurate forecast model, scientists need to understand better how the horizontal movement, shape alteration, and melting of sea ice in the marginal ice zone all contribute to the ice edge's locations and properties.

The marginal ice zone is a region within the ice pack that is strongly affected by the contiguous open ocean. Adjacent warmer ocean water increases ice melting, and storm-generated ocean swells break off ice floes up to 60 mi into the pack.

Meteorological factors are also involved. During winter when the wind blows off the ice pack toward the open ocean, the ice advances into the sea, and floes along the edge are pushed into warmer water. When the wind shifts, blowing from the ocean, the ice is driven back toward the north and is recompacted. This is believed to cause fractures, rafting and ridging far into the ice pack.

FROM: MARINERS' WEATHER LOG
NOAA - SPRING 1983. V-27-2



SS EXIRIA - KAUD

Loading locomotives at Erie, PA for Turkey - 1967. Photo by Bob Mirvish.

HEAVY ARCTIC HAZE

A pollutant-laden haze appearing in the Arctic each winter is far heavier than expected this year, sharpening interest in its possible effects upon world climate.

Dr. Russell C. Schnell, of the Commerce Department's National Oceanic and Atmospheric Administration, said recent flights through the haze from Anchorage, Alaska, surprised government and university scientists.

The haze layers were found to be much more numerous than anticipated, and the intensity of the pollution larger than expected. The pollution was spread over much larger areas than originally had thought it would be. The haze was exceedingly thick just above the ice cap, thinning at higher altitudes. One surprise was that the haze reached 18,000 ft.

Preliminary analysis of air samples taken on the first flight from Anchorage indicated the haze was composed largely of PCE--perchloroethylene, a chemical used, among other purposes, in dry cleaning solutions--and hydrocarbons from burning fossil fuel. This appears to support the belief the haze is caused by human activities. Much of the haze is thought to originate from Europe and Northern Asia.

Air masses from these areas are transported into the Arctic during the winter months, carrying pollutant particles and gases which could be causing atmospheric warming. The extent of warming, and the potential impact upon the world's climate, are not known because, until now, there has been insufficient data from which to develop more accurate climate models.

The NOAA plane flew back and forth through the haze for hours, collecting samples and obtaining real-time instrument readings. At times, the four-engine aircraft was 50 ft. above the surface of the ice pack, while on other passes it was nearly 30,000 ft. high.

The Anchorage-based flights were to be followed by others from Thule, Greenland, and Bodo, Norway, with at least one mission taking measurements over the North Pole.

FROM: MARINERS' WEATHER LOG
NOAA - SPRING 1983. V-27-2

Last Voyage of the S.S. Exiria

You've made a thousand landfalls,
In a thousand ports or more:
You've shifted many a cargo
To far and distant shore;
You've sailed through blazing conflict
You've carried guns and grain,
You found your peacetime lifework
On a steady run to Spain.

Now the years are on you
Your plates grow old and frail;
Your engines labor valiantly
But shudder in each gale.
You show a quarter century
Of steadfast labored chores,
And now you have grown weary
Of strange exotic shores.

EXIRIA! EXIRIA! The time has come to rest -
To lay down all your burdens,
And do that which is best.
Sail on that last long voyage - -
You'll never make again;
And so come to your final berth,
In that unknown port in Spain.

Robert F. Mirvish



Night Watch

By Herb Scott



"Once upon a midnight dreary, while I listened sleepily and weary, Unto many a call "CQ" who hears me? While I nodded, nearly napping, suddenly there came a signal, Calling from a long way off."
Apologies to Edgar Allen Poe.

used to get together each time the Lurline arrived in Honolulu. I don't know now what has become of Ben, but I suspect that by this time he has sailed into his last sunset.

I have often wondered over the years what has become of so many of my radio friends. It would be nice to know.

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"Grand Old Man" of Electronic Communications



H. J. SCOTT

1 9 1 5

Chief Wireless Operator
S.S. PRESIDENT - WGP

In the long lonesome hours of the radio night watch in the "old days" many of us spent our time listening to far away spark stations. What a bang it was on our approach to the Japanese coast to hear KPH on 600 meters in San Francisco some 5,000 miles away with his press schedule! And then there would come booming in the low pitched Canadian station VAE on Vancouver Island with a long list of ships for which he had traffic.

Suddenly, along about 3:20 in the morning, a faint sputtering signal came in very weakly calling "CQ,CQ, please answer, please answer, anyone".

I started up our transmitter and responded with a long, long call. As it turned out he had a little 1/2 KW transmitter and had been trying to get in touch with anyone within his range. His message was for the ship's owners regarding his position and stating that they had left ceylon. I relayed his message to KHK in Honolulu for him after which we briefly chewed the rag for a bit.

I told him we were the S. S. Pawlet on our way from Portland, Oregon to Singapore and Calcutta via Shanghi and Manila. He said they were a small tramp freighter out of Oslo, Norway of about 6,000 tons and were bound from Ceylon to Panama.

For a couple of nights we stayed in touch but I finally lost him. We never knew each others names but our paths crossed by way of radio.

In those days we often made friends through our contacts by radio. For instance, when I was on the Columbia River Bar Tug "Oneonta" (WPX) circa 1914, I met Ben Hamilton of KPC, Astoria, Oregon and became a friend of his. Some years later in 1922, when I was on the Hawaiian run on the Lurline (WML) I was on Waikiki Beach in Honolulu one day and who should I run into, but Ben! He was then at KHK. After that we



Professor Herbert J. Scott retired as Professor Emeritus from the University of California where he was Dean of Electronic Engineering, in 1964. He served for thirty years. During tenure with Bell Labs he installed the first radio-telephone on the Mighty SS "Leviathan. He has 13 radio patents to his credit

"To The SOWP Brass Pounders"

BY William Brennan

TKS FOR THE QSO, OT,
IT SURE HAS MEANT A LOT TO ME.
I COULD SEE BY THE CUT OF UR RIG
AND THE TRACE ON UR SIG
OF BANANA BOAT SWING
MAKING UR VIBROPLEX PURR ES SING.
TT U WERE NO STRANGER TO SEA OR SKY,
FROM CAPE WAITE TO ICELAND
FROM JAVA TO CLYDE*
TT EASY CW FM UR FIST
BRINGS MEMORIES BACK FROM OUT OF THE MIST
OF YEARS NOW FLED.
THE SOUTHERN CROSS, POLARIS BRIGHT,
LONELY WATCHES IN THE NIGHT
DOWN THE BLUE GREEN HILLS OF THE SEA.
QRU ES QRT, ES I'LL SAY 73,
HPE WE WILL MEET AGN
ANOTHER TIME, ANOTHER BAND?
LOOK FOR ME, I'M SURE TO BE
WITH THE SOWP.



1 9 8 5

Attending SOWP Meeting of the Golden Gate Chapter - 70 plus years in Electronics and Communications. "Herb" served as Secretary of the Society for four years. He is still active.

Ed Marriner's Dream

Editorial Comment

Edmund H. Marriner - 313-P [W6XM] whose first professional assignment was on the M/V South Africa in 1933 became a member of the Society in 1969. Since joining the Society he became (VP) Director of Chapters) from 1970-73 and served along with 'Irv' Hubbard, 'Hal' Craig, Bill Clyne and Ernie Wilmshurst to establish the Otis Moorhead Chapter of the Society. This Chapter [IV] changed its name to "Star of India" Chapter. Ed served as Secretary, Treasurer, and was editor of their 'News Letter' for several years.

During 1934 he also served on the SS President Lincoln and Cuzco. After a tour of Navy duty on the USS Pensacola from 1935-37 and the USS Wright 1937-39 he joined the CAA and was assigned Wendover, Phoenix and Kingman. During 1941 he started a 4-year assignment with the FBI after which he transferred to the U.S. Naval Electronic Laboratory at Point Loma, Calif. He stayed with 'NEL' until 1969 when he retired. Following retirement, he resumed a journalistic career and wrote many articles for "Ham Radio" and other publications most of which have long since ceased publishing.

One of Ed's cherished ideas was that of writing a book covering a history of the early days of radio nee wireless on the Pacific Coast. During the years following retirement he was active in contacting and collecting stories and material from as many of the early day operators and others in communications as he could contact. He was quite successful in his effort and accumulated many pictures, stories, and a large cross section of memorabilia for his project. Regretfully he was never able to find a publisher, nor did he have the time to complete the book although much of the biographical material was type-set and ready for printing. After joining the Society, we have received many articles which were published in our earlier issues.

Several years ago, Ed donated a considerable quantity of this material to us and we have drawn on it from time to time for 'spot stories' etc. Since we decided to publish one edition which will cover the use of wireless on the Pacific, we thought the material Ed furnished would 'round out' the history of much of our historical past. Regretfully the copy available lacks continuity and the time frame relates to the late 1950's and early 1960's. However, I am sure members and readers will enjoy the pictures and stores as we reproduce them even though they may not follow the original concept of Mr. Marriner's "dream". We do hope that after he reads the following pages he will feel that his efforts of 'long ago' have not been in vain.

William A. Breniman

HISTORICALLY SPEAKING

Historically speaking, how did it all start on the West Coast? Talking to the old time wireless operators, commercial stations could be just about anyone who had the ability to read a magazine, build a wireless transmitter and assign himself a call sign. Many hotels and tug boat companies hired telegraph operators and did just that!

The first West Coast Wireless Network started in Alaska. During the various Alaskan gold rushes, starting in 1898, towns and camps mushroomed over night, with plenty of tin horn gamblers and other characters (as described by Robert W. Service) wandering from place to place. By 1900, better communications than boats and dog teams became a necessity.

In 1900 Congress gave the Army Signal Corps money to improve communication and invoke them with the responsibility for a cable line to Alaska and to the interior. This cable line was constructed under great difficulty. The poles had to be set in permanently frozen ground.

By 1903 the U.S. Army had strung wires to St. Michaels and they were then faced with the problem to reach Nome. This meant a choice of going around Norton Sound with a pole line under the worst primitive conditions or laying a cable which would be carried away by ice each year.

Because the U.S. Army Signal Corps by now had some experience with wireless telegraphy, the last link between the two stations at Nome and St. Michaels was by wireless. The link was 107 miles via wireless and then 3883 miles via wire to Seattle. During this 1903 experiment, Dr. Lee De Forest exchanged satisfactory communications between Fort Safety and commercial service to Alaska was in effect.

Dexter Bartlett saw some of this old Army equipment functioning at Craig, Alaska as late as 1922. An old 3 KW transmitter was run by a gas engine. The transformer, usual glass plate condensers, straight open spark gap with cup-like electrodes, and plain helix, were still going after all these years. Wireless proved itself easier to maintain than wire telegraph lines.

During this early time, there was no control over wireless stations by the government. The telegraph companies selected their own call letters and we find the same call being used by several locations. The government control of call letters did not go into effect until July 1st, 1912.

By now the stations had to operate on a certain wave length. It was decided ship to shore traffic would be on 600 meters. The alternate wave was to be 300 meters which proved to be inefficient due to the average ship aerial being determined by

the distance between masts. This required the use of a series capacitor in the antenna lead for resonance, thus the output was always lower than the 600 meter frequency wave and seldom used. The old spark signal depended on the distance of the gap, frequency of the AC power supply (Motor Generator sets run from the ship's Direct Current). Later came the rotary gaps. The modern operator, used to hearing CW signals, a sine wave of whatever frequency he sets the heterodyne would be surprised at the spark signals which had all sorts of sounds depending on the length of the gap and AC supply. About 1915 quenched spark gaps with a 500 cycle note began to appear. Thus an operator on a pair of earphones far out to sea in those days heard dozens of signals of all pitches and tones presumably on the same frequency. By clever manipulation of his receiver he could concentrate on one station to the exclusion of the others.

Introduction

The "Old Time Wireless Stations," like the operators who manned them are gone. The "Golden Age of the Sea Going Wireless Operators," who operated the rough notes of the spark transmitters or nostalgic musical notes of the arc, made the blood flow in any young man with wanderlust. That old quenched spark gap with the pickle jar muffler, had a far away sound and lured many an operator off to sea.

In the very beginning I can imagine the young operator, his first time aboard ship, with the new transmitter resting in front of him, unmarred newness, fragrant with mysterious odors of lacquers and phenolic compounds all enclosed in the tight stuffy wireless shack. Outside, the smoke, stack gas, and carbon grime is seen on the bulkhead. The lifeboat cover is encrusted with a combination of salt spray and soot in view of the wireless shack porthole.

Perhaps the new operator once aboard would familiarize himself with his new treasure before the ship got underway. He might first turn on the switch and press the key like they taught him in the Marconi School in "Frisco." Maybe he might take a pencil and draw an arc off the antenna lead-in, or watch the meters flick a few times to instill confidence in himself.

Once back from a long voyage, "Sparks," might come into port looking for a new ship, spend his money and be out of work. What to do? Go down to Casserly's Bar on Market street where he could get a free hardboiled egg and a ham sandwich for the price of a five cent beer.

Next in order, check in with Malarin the hiring agent for another operators job. Malarin would tell young "Sparks" to wait in the static room. Hours would go by and getting tired, the young man might stick his head out of the door to find Malarin had forgotten him and gone off to the ball game.

Once again onboard another ship with a little more experience he might have thought to take along a bag of silicone which in his spare time he might pick out some good hot crystals for detectors. Some of his time might be spent in building his own receiver from an army surplus audio tube or fixing the spark gap up by putting a 30-30 shell case over the gap for a better sounding note. Then there was that little trick of dropping the helix to broaden out the signal. Once out of port he could contact the Navy station on 2300 meters by doing this modification.

On the return trip being more experienced, young "Sparks" might have gathered a few bottles of "Old Crow," prohibition being in effect, for his friends at home who might want a drink. The stowage problem was always solved by putting a few bottles picked up in Victoria, B.C. in the transformer oil or behind the fuse panel marked "High Voltage."

Acknowledgement

I want to thank all of you "Old Timers" who tore pictures out of their albums for me to copy. In the thousands of scraps of papers I can't name all of you that helped with this history and by-lines for the photographs.

Mr. "Cliff" H. Watson started me out on this project and a good many letters went back and forth between Mr. Dexter Bartlett and myself.

Many, many fellows came by the house to talk to me and others like George Hubbard and Vincent I. Kraft spent a lot of time writing up portions of the text which had to be incorporated with other bits of information preventing attaching their names to the writing.

I hope you all understand, and I don't take credit for myself. You fellows wrote it, while I sorted out the material, wrote letters, and copied the pictures on a beat up camera.

A number of interesting experiences took place tracing down old operators and connecting others up who had not seen each other in forty years or more.

I know we missed many names of the gang, but circulated notices and letters for over a year's time asking for information, this is what we had.

Ed Marriner, August 1961
La Jolla, Calif.



West Coast Stations - The Early Days

Seattle, Washington



Main office of the United Wireless Company in Seattle
By-line Modern Electrics Magazine

This was conceded by experts to be the most complete and thoroughly equipped wireless telegraph instrument factory in the country, and has just been completed in Seattle by the United Wireless Telegraph Company. The structure is situated at 1426-1428 Jackson street, on a hill overlooking the manufacturing district of the city, where ample light, fresh air and transportation facilities are unexcelled. In fact, the site is ideal for a factory of this kind and was selected with a view to having a permanent home for the producing department of the company.

The building consist of three stories and basement. It has a frontage of fifty feet and extends 100 feet back to an alley. Concrete was used through-out in its construction, making it practically fireproof.

The plant is fitted with almost every known device to facilitate the manufacturing and handling of wireless telegraph apparatus. An electric freight elevator has been installed for more conveniently carrying on the work of the plant. Fire escapes, open plumbing and other modern fittings have been used for the safety and convenience of the employees.

In connection with the testing room an antenna has been erected on the roof of the building and lead wires run directly to the testing room. This feature of the factory is considered one of the most important in the plant. Not only can tests be conducted satisfactorily by this arrangement, but aerograms can be exchanged with other stations of the company in the Northwest as well as with boats at sea. Orders for apparatus can be transmitted direct by the operator aboard an incoming boat so that by the time the vessel arrives at its dock the instruments can be on the pier ready for installation. This avoids unnecessary delay and confusion on the arrival of the craft.

A fully equipped laboratory is maintained by Superintendent N.O. Nelson so that the latest inventions and ideas in wireless machinery may be tried and experiments made to improve the present equipments, if possible.

A force of expert wireless engineers, designers and electricians is at work every day in the week at this busy place but the factory is scarcely able to keep pace with the demand.

Info: From "The Pacific Aerogram. Vol 2 July 1910 no. 4

Loaned by Mr. N.O. Nelson,
3710 Brooklyn Ave.
Seattle, Wash.



Some typical United Wireless Telegraph Equipment being built in the UWT factory in Seattle, Washington. Picture by L. G. Haw
-- 1910 --



United Wireless Telegraph Company's Machine Shop
At Seattle, Washington. Right Eden Haw. Photo by:
Gordon Haw

The top floor of the building is occupied by the machine shop. Here the material in the rough is taken and the work of turning it into the various devices for sending aerograms is started.

The second floor is used as an office, drafting room and testing room. On this floor also are located the nickle plating and polishing departments. A general store room and shipping department occupy the remainder of the floor. The wireless instruments are set up and tested thoroughly before going to the shipping room. The testing department is one of the most interesting places in the establishment. It is equipped with two mammoth switchboards, from which both direct and alternating current can be obtained, of almost any voltage desired. Every piece of apparatus is sent to the testing room and given what is known as "the break down test". If any defect is discovered the instrument is returned to the manufacturing department.



PA Seattle, Washington
1909 On University of Wash.
Campus. 210 Ft. Tower

United Wireless Station "PA" at Seattle, Washington

"PA" was established about 1910, where the Alaska Yukon Pacific Worlds Fair had been located in 1909 on the University of Washington Campus.

The antenna was a 210 ft wooden mast, with a four wire flat top using 12 foot spreaders. The antenna ran over several hundred feet to a wooden water tank and was fairly effective because of the land topography.

During 1913 the station was moved to the Maritime building, in which the engineering shops were located. The new location was no where near as good as the earlier station location. Thus about 1916, PA was again moved to the 42 story L.C. Smith building in down town Seattle. Here a 5 KW 500 cycle quenched spark gap transmitter was installed by Vincent Kraft. The antenna ran from the 35th floor of the building over to the top of the ten story Alaska building. There were sixteen wires in the flat top.

About this time the call was changed to KPA and then at the out break of WWI the U.S. Navy took it over and changed the call to NVL. At the end of the war the original call letters were returned to the station.

The primary concern of KPA was making contact with ship arrivals to Seattle and not very much night traffic was handled.



Operators - Equipment - Locations

Wise Chinese philosopher Confucius back in 478 BC say ... " One picture worth ten thousand words" Ah So !

"Think 50,000 words as you read this page " !!!



Early days at Station "PA" Seattle. George C. Hallett sitting on front porch. Assistant Operator stabdubg (not identified). Call letters changed to "KPA" about 1917-18



Oregon's first commercial Radio Telegraph station Astoria Ore. (1907) Alfred Ferland first operator in charge. Photo By Chas A. Beck

Alfred Ferland first operator in charge at Astoria, Oregon 1907 Oregon Historical Society photo



Malarin, Lawrence "LM"

Operated "PH" downtown. Chief Operator for United and Later RCA. Had the habit of sending Bob West to sea with Bob East, Marsteller with Marthaler, Baer with Wolf. After many years with Marconi went back to sea from Seattle.



United Wireless Station "PC" At Astoria, Oregon on the Columbia, River

Astoria, Oregon

United Wireless Station At Astoria, "PC"

In 1907 the United Wireless Co. decided Smiths Point at the west end of Astoria would be a perfect spot to construct Oregon's first Wireless Telegraph station. "Old PC" was finally located on top of a hill at the end of "G" street in Astoria, Oregon. Fine homes now occupy the site, but in those days things were very primitive, including the old shed used for a wireless shack. Dexter Bartlett visited the station in 1916 and the shed was still in use, including the old United equipment.

During Nov. 1907 the station was coming along very fine using Dr. Lee De Forest's equipment. It was activated with Mr. Alfred Ferland as the first operator. The masts were 204 feet high but during the winter of 1907-1908 they toppled due to a strong gale, barely missing the building. This of course put the station out of commission until next spring when two masts 113 feet high were erected, with a flat top antenna, having a down lead at each end ending in a stub mast and then a single wire into the station.

The De Forest equipment consisted of a 2 KW transformer, straight spark gap, the usual Leyden jar condensers and a one coil helix for the transmitter. The receiver consisted of a two coil tuner with carborundum electrolytic and silicon detectors, plus a whisker point coherer consisting of a german silver wire with a platinum core 1-1000 inch in diameter. The station was connected to Astoria by Western Union.

In 1908 or 1909 the Atlantic fleet made a world tour, with the USS Connecticut as flagship. It passed by within sight of Smith Point, and "PC" furnished the news. The fleet, even at that time was equipped with De Forest radiophone sets.

Some of the early wireless operators at "PC" were: Lynch, R. De Champlain, Joe Hallock, Bill Vetter and Dexter Bartlett.

Vincent Kraft helped dismantle "PC" in 1918, now known as KPC. The old guyed square tapered wood masts came down. The masts had been constructed with over-lapping joints with brown wood apparently creosoted treated wood all the way to the top.



PC



Kraft, Vincent I
7025 18th Ave.
Seattle 15, Wash.

I was actively identified with wireless starting around 1911 and an amateur before that. In 1912 I was on the City of Seattle. In Aug. 1912 I was assigned to the SS Senator and relieved Cliff Watson and can well remember Joe Hallock helping Cliff off with his gear. George Wiltse was my second operator on that trip, making his first trip to sea. That was the first ship on the Pacific to carry more than one operator. The law requiring continuous watch was to go into effect Sept. 1, 1912 and two operators were put on the Senator early in August as she would be at sea or close to an Alaskan port where no other operators would be available when the law went into effect.

Wiltse in later years became head of the FCC office in Seattle, similar to the position of Joe Hallock in Portland.

I well remember most of the stations of the United Wireless and later the Marconi Co. I also remember the Navy stations as well. I was an operator in 1913-1917 on shipboard for United and later in the engineering department, installing equipment on land stations and on shipboard. For the next 45 years doing engineering and building one of the first broadcasting stations in Seattle, owned & operated KJR, KXA.

Dawn of a New Era - 'Wireless'

Dexter S. Bartlett - Pioneer



Dexter has many stories to tell. As a kid from Minnesota and a farm town, he always had ideas of roaming the world. His dreams came true on New Years Eve, 1916 when he signed on the old tug, "Wallula", at (WPY) Astoria, Oregon. He recalls that his wages on the tug were the same as the mess boy's which was a rude awakening from the rosy dreams of sailing on a luxurious sight-seeing ship.

After a couple of hours aboard the tug, they received word that a steam schooner, the "Klamath", had lost her propeller and was drifting ashore at "Dead Man's Hollow", just south of Tillamook Head in a heavy gale. Off they went to the rescue across the Columbia River Bar just as the bells were ringing in the new year, 1917. It was a risky crossing, with seas breaking but they got across the bar. About this time Dexter was sure seasick and wishing he was back in Minnesota on the farm.

During the spells of being seasick he had to make communication with the Klamath and obtain their position. Right then the old United Wireless set went dead. After hours of holding on with both hands trying to fix it he located a broken wire. By now another ship had picked up the Klamath and found her safe. The tug owners were now out salvage money and poor Dexter got fired, the only time in his life. C.B. Cooper still had faith in Dexter and got him a new job on the old tug Tye operated by the Ship Owners Radio Service Inc.

In later years Bartlett spent 25 years with the CAA, a good portion of his life and then retired from Boeing Aircraft in 1959.

DEXTER S. BARTLETT - 145-SGP. was a Charter Member of the Society of Wireless Pioneers. During the early 1970's he was our Historian and furnished reference books and a wealth of material suitable for publication. "Old Bart", as his friends called him, spent considerable time researching material for the Wireless Almanac. With the help of Herb Scott and Fred Rosebury, we hope to publish this in the near future. In our files we find no pictures of 'Bart' except the snapshot above, taken on Kodiak Island. He is on the left.

Dexter first went to sea on the Tug Wallula in 1916. Since then he has sailed nearly every ship of the Alaska S.S. Company. He became a Silent Key March 15, 1982 following years of service at sea and later in the CAA. and for Boeing Aircraft Company. -30-



"Greyhound" of the Pacific" owned by the "Great Pacific Steamship Company". She was a 'twin' to the Great Northern. These two ships were built in 1914. Each 509 feet in length, 63 foot beam, and tonnage was 8255. They ran between San Francisco and Flavel, near Astoria, Oregon. The Great Northern's call was "WIR" and the Northern Pacific "WIM". The Great Northern was later sold to the Pacific Steamship Company (Admiral Line) and sailed at the H. F. Alexander for many years. The Northern Pacific was destroyed by fire on the East Coast. W/O berths on both ships were 'coveted' assignments.

10 Kw. at "RH" Roche Harbor, Wa.



Roche Harbor, Wash. Wireless Station

One of the very earliest wireless stations on the West Coast Plant of the Tacoma and Roche Harbor Lime Co. showing masts on the hill supporting the antenna for the spark transmitter station "RH" (10KW)

By-line Mr. T.C. Smith Seattle.



The sea-going Tug Goliah - "WPG" owned by the Puget Sound Tub Boat Company was one of the most powerful tugs on the Pacific Coast. Picture here was taken by Dexter S. Bartlett who spend a long assignment on her. The tug was taken over by the U.S. Navy in 1918. Last report about her, she was convoying the surrendered German Fleet into Scapa Flow. The Goliah was anchored at Arutan Bay Alaska when this picture was taken.



View of Station "RH" at left with aerial. The Sailing ship Archer in right panel carried lime, made at Roche Harbor. It was the first vessel on the West Coast to carry wireless. Photos were taken by T. C. Smith of Seattle and early Wireless Operator.

Wireless - Don't Leave Port Without It !

United Wireless Telegraph Station, "PE", Portland, Oregon

The Portland wireless station was located on Council Crest, the highest hill in South Portland. It was constructed in 1906 and used the call sign, "PE". The station had a 200 foot wooden mast, guyed, with a four wire loop running over to an observation tower that was in the northwest center of the amusement park.

United Wireless Station "PE", Portland Oregon

News Item, April 18, 1906 from the Portland Oregonian

G.L. Mellegan, a wireless expert who has spent the past week in Portland tuning the local station, that is, adjusting the wave length sent out to that of the other stations so they may talk together, has watched the development of wireless from the time a message could be flung through the ether a scant four miles. He believes the development of the ether wave will give to science the power to make daylight. He says it is only a question of short enough vibrations of the wave, together with high enough frequency of the current. He also thinks power will be sent through the air in future without wires. Mr. Mellegan installed the wireless station in St. Michaels, Alaska, the first commercial station ever established on the West Coast.

Historical Notes on PE United Wireless Station in Portland From the Oregonian April 19, 1908 by C.H. Williams

If you were on a ship midway between Portland and Honolulu and the craft were to sink beneath the waves, you could while the waves were lapping hungrily at the sinking craft, send a message to your friends in Portland and direct disposition of your property. Or if your voyage were more happy, and was to end at Portland, you could, while off the Columbia River, far out of the sight of land, order a cab sent to your pier to meet you at the hour you step off the gang-plank.

You can order rooms reserved at your hotel, notify your wife you will be home for dinner, or do any one of the thousand things that you can do through the old telegraph and telephone system. If the shaft of your steamer breaks and the vessel drifts helplessly at the mercy of wind and wave at any point off the coast from Sitka, Alaska, to Magdalena Bay, your captain can flash a message to Portland for a tug, giving the location of the disabled vessel, with reassuring messages to friends of passengers on board. This is a splendid accomplishment, when it is remembered that thousands of steamships, similarly disabled, have drifted helplessly for weeks and many have finally gone down, overwhelmed by storms.

All these things and innumerable others have been made possible by the installation of the new wireless station on Council Crest by the United Wireless Telegraph Company, which has just been put in operation. With the crash of the wireless spark as his only companion, D.A. Cameron, the operator, keeps vigil over the city sleeping far below him, for the station works only at night, when conditions are most favorable for the wireless apparatus. The violent rays of the sun at war with the ether that carry wireless messages, and fight them like red corpuscles in the blood do disease germs. Humidity in the air also breaks up ether waves. Only short distances are covered by wireless in the daytime. Messages to be sent over 200 or 300 miles are transmitted at night when conditions are perfect.

Every night Operator Cameron, hears the wireless messages passing between Admiral Evan's fleet of fighting ships and Southern California stations. He hears what ships far out at sea have to say as they pass each other hundreds of miles apart. He is chummy with the operator at Sitka, Alaska, and chats with the man at the key in the lonely hut on Tatoosh Island, as readily as one neighbor to another over the telephone. He gossips with the man on watch at San Diego, and the stations between as readily as one man to another across the room.

The wireless telegraph operator is another Aladdin. He caresses his key, which is another magic lamp, and the genii of the clouds do his bidding. The willing slave carries his message a thousand leagues over land and sea, and delivers it more quickly than a flash of lightning. Before the wink of an eye is accomplished, this modern wizardry is done.

This is nothing short of magic - greater magic than the wonder-workers ever wrought. That one may send a message across mountains, over deserts, fling it across oceans, without wires or cables, losing not a letter of its import, is nothing less than a miracle.

Would the steamship Columbia have gone down last Summer off the California coast in collision with the San Pedro, had both vessels been equipped with wireless as Portland-San Francisco steamers are now? Probably not.

By wireless telegraph and its sister invention, the wireless telephone, ships can warn each other of approaching danger, even in the densest fogs and smoke, which often make visual signaling impossible. Lighthouses equipped with wireless can warn ships off the shore more effectively than the present system of lights.

A striking demonstration of one of the many uses of the wireless was made last August by an enterprising New York newspaper. The annual cruise of the New York Yacht Club was about to be sailed through Long Island Sound and the newspaper equipped a tug with wireless apparatus and arranged to send financial bulletins and stock quotations to it every little while. The tug was to follow the fleet of pleasure craft and hoist signals telling the latest news of Wall Street. Each yacht had been supplied with code books in advance by which the owners could interpret the tugs signals. Wireless messages were flashed to the tug from the top of a Broadway skyscraper, where a mast and laterals had been set up.



C. L. MELLEGAN

Installed and tuned the new station at Portland, Oregon in 1906. Mr. Mellegan was an 'expert' on installations for United Wireless Telegraph Company. After completing Station "PE" he left for Alaska to install some 14 stations.



D.A. CAMERON

First Operator of the new Station "PE" at Portland Oregon which was put on the air April 6 1906.



JOSEPH H. HALLOCK (L)
CLIFTON H. WATSON (R)

"Wireless" brought these two Portland lads together circa 1906 when their common interest was fired up by this new magical invention.

This picture was taken aboard the SS NEVADEN - 1917. More on each will be found in following pages.

While the fleet was gathering at Glen Cove a number of the yachtmen declared they intended to separate themselves entirely from business worries during the cruise. They accepted the code books politely, but intimated they would not be used. On the following day the financial storm broke.

Many who had steeled themselves to be heedless at the outset were the most interested readers of the financial bulletins. From having promised themselves to be interested only in squalls at sea, they began to strain their eyes for squalls on the New York stock exchange. Scores who started out to remain with the fleet until the finish of the cruise at Newport hastened back to the storm-center. Those who remained were kept as fully advised of the market as if they had been in their own offices.

One minute and thirty seconds was required to flash the news of the London opening to the fleet, the message being relayed by the Newport naval station, and in three minutes the OK had been sent back to the New York operator that the wireless tug had received the message.

The same newspaper office was in possession of the fact that the schooner yacht Elmina won the Astor cup two minutes and thirty seconds after the boat crossed the line, all due to the re-traveling on the ether wave, and then sent across the country and picked up as wireless messages.

But the most wonderful development in the field opened up by the wireless inventor is probably as yet unguessed. Operators believe that the constant improvement of sending and receiving apparatus that is bound to come, the wireless message will be sent longer and longer distances, and no one can guess what will be the ultimate distance spanned by the wireless spark.

Like the other big advances in science the wireless telegraph has made the world smaller. For centuries the earth has been shrinking. When Marco Polo first circumnavigated it, the globe grew noticeably smaller. When the first steamer boat ploughed the Atlantic, distances grew less. With the invention of telegraph and telephone and the building of steam railroads,

In the New Station

At the Council Crest station, a mast 200 feet high has been placed, from the peak of which stay wires reach in each direction. These wires are not used in receiving or transmitting messages, eight antennae serving these purposes. There are 26 other stations on the Pacific Coast already, all of them in touch with the Portland station, as well as a number of ships that ply across the ocean. From Portland to Sitka is 870 miles, while to Magdalena Bay is 1590 miles more. Stations will be placed within a short time at Coos Bay and Grays Harbor, making a chain of wireless masts that will be ready for communication with each other at all times reaching the whole length of Western North American Coast.

Wireless messages have been sent very long distances successfully. Last Spring the naval wireless station at Point Loma, Calif. took part of a message sent by the wireless operator aboard the Connecticut, which was off the east coast of Cuba. A message from the battleship Rhode Island was received by the same station, the vessel being at that time off Cape Henry. The Armored cruiser Pennsylvania, in San Francisco Bay last August, took a wireless message from Savannah, Ga. a distance or more than 2400 miles. The message was recorded without a break.

The station equipment consisted of a De Forest-Shoemaker 25,000 volt transformer, glass plate condenser and conventional tight coupled Helix and Spark Gap.

At the time of installation the first operator was Tommy Thompson. Later Jess Sweitzer took over for several years. After that John Julian ran the station later transferred out to the Federal station at Lents. This was a Poulson Arc station.

Before "PE" closed down, United Wireless Company had installed a station in the Perkins Hotel using the call "DZ". The operating position was down in the lobby operated by the Chief Operator, C.B. Cooper, known as "CBC" with Cliff Watson. The spark was up on the roof of the hotel in a dog house with the antenna running one full block to the top of the Sweetland Building.

About this time, United Wireless Telegraph Company expanded and put stations in hotels up and down the West Coast. One of the stations near Portland was located at Kalama, at a point which the trains transferred across the Columbia River on the way to Seattle. The station at Kalama had the call "PV". It was a relay point to Chehalis, "DV" where the operators were Billy Anderson and Desart, later Jess Weed.

This group of stations around Portland could contact stations far north to Friday Harbor, Seattle and ships across the sound. Other stations in the net were, Bellingham, North Head, The Dalles and Salem.

Probably the first wireless came to Portland on Admiral Fullam's flagship the USS Charleston during the Lewis and Clark Centennial June 1st 1905. The transmitter onboard was a 2 KW spark with a De Forest audio control box receiver. If you doubt it, Cliff Watson states, "They sure as hell had one on the Charleston, I was there."

News Item: Portland Oregonian April 7, 1907

The Council Crest station of the United Wireless was just put into operation and is now working with San Francisco, Tatoosh and Table Bluff. The operator can hear all stations from Victoria B.C. to Mexico, but not Sitka, Alaska. The operator said he was able to contact the steamer Enterprise 400 miles out from San Francisco bound for Honolulu.

The best line of wireless stations in the world will soon be installed on this coast. Wireless Telegraph works better here than in the East because there is less humidity in the air. Mr. G.L. Milligan the installer will now go from Portland to Alaska, where United Wireless will establish 14 stations. The United Wireless has about 100 land stations and 150 ships.

'S O S' to the Rescue. Many Were Sent

General Information of the United Wireless Telegraph Company

In the early 1900's there was quite a bit of stock selling promotion. Wireless was new and where it was going was anybody's guess. The United Wireless Telegraph Co. had a few stations by 1909 and by 1911 it was a large business organization. They would not sell equipment, only lease it. A steamship company would pay a monthly rental for the equipment of \$200 per month per ship. United furnished the operator whom they paid \$40 a month. Of course the operator got his meals and lodging from the steamship company. In port he received \$1 a day extra and not served meals. In those days this was not as bad as it might sound. The operator had no expenses except for clothes, and also got a chance to travel to all sorts of places in the style equivalent to fine hotels, and being away from where he could spend his money, and actually he might save some. Marconi operators on the East Coast started at \$30 per month but \$40 was the lowest on the West Coast.

THE END COMES FOR THE UNITED WIRELESS TELEGRAPH COMPANY

The United Wireless Telegraph Company trying to capitalize on the new device, "Wireless," incorporated and sold stock in tremendous quantities. Thousands of people saw a chance to get rich by getting in on the ground floor of this new invention, and the principal company they could buy into was, United Wireless. It was a national company in scope with offices on both coasts and the Great Lakes. To keep in the public eye, they built a string of wireless stations on both coasts and the Great Lakes. Some of these stations later developed into very valuable outlets but at that time had little value in commerce but showed on the maps of those selling stock.

There were two distinct phases of the company's operations handling traffic between ship and shore, and selling stock for promotional purposes. In charge of the financial operations on the West Coast was George H. Parker, Fiscal Agent for United Wireless, with headquarters at 601-632 People's Bank building, Seattle. These offices were separate from the operating end of the company which was located in the Arcade building, Seattle.

Stock was sold in great amounts, totaling millions of dollars. George Parker lived in a newly built mansion in Seattle. Suddenly in July 1910 the bubble burst. Parker was indicted, tried and sent to the penitentiary for misappropriation of funds, as were several other officers. One clipping in the newspaper reported Parker had been found to have made 66 big real estate transactions here presumably with United Wireless funds but for his own advantage.

The fancy offices were closed, while the manager and his stenographer operated out of the newly built factory. Within two years, United merged with Marconi Wireless Telegraph Co. or American Marconi Co. Later it became RCA. Such was the meteor like rise of a new industry which inspired many wireless operators, and then fizzled down to sputter.

Poulson Wireless Telephone and Telegraph Company

Cyril Elwell of Palo Alto obtained the patent rights for the Poulson arc developed by the Danish engineer, Valdemar Poulson. Elwell formed the Poulson Wireless Telephone and Telegraph Co. in 1912 with himself as president opening commercial communications between San Francisco and Honolulu a distance of 2400 miles. The following year 1913, Elwell left the firm which had been purchased by the Federal Telegraph Company.



Charles B. Cooper

Seated on the first Radio-Tail-E-Phone at the Leadville, Colorado United Wireless Station, 1905. "CBC" in 1904 demonstrated wireless for Dr. Lee DeForest at the St. Louis Exposition. Later was an installer for United and then organized the Ship Owners Radio Service in Seattle, Wash. Now retired on Long Island, N.Y. "CBC" was well known on the West Coast and one of the really old time wireless men.

Federal Telegraph

After the collapse of the United Wireless Company, the most active commercial wireless company on the west coast was the Federal Telegraph Company. It operated under the Poulson patents and the equipment was imported from Denmark in 1910.



GENE C. HALLETT
Senior SGP - 468

FS: 1909 Tug Goliath-A-3
SOS CALLS (1) SS Ramona
1911 (2) Dellwood/KUBZ in
1940. Served on 64+ Stations
& Ships to 1948. "SK" Feb.
14, 1972



LLOYD PEEK

Charter Member - SGP-45
FS: 1917 SS Adm. Farragut-
WAB. SOS - SS Umatilla on
Mar. 5 1918. Served on many
Alaska SS Line ships, Matson
etc. "SK" Aug. 17 1972



EDWARD L. STEVENS
[Left]

Senior SGP # 379, FSL 1905
on USS CHICAGO; 1907 at
Pt. Arguello "TK"; 1910-12
S.F. "GP & PG". Was on the
USS Chicago when received
ifn about SF Earthquake. He
served on Many early ships
also supervisory positions.

STANLEY E. HYDE
[Right]

Senior SGP-343, FS: 1911
on SS Cabrillo UWT. Held
Certificate of Skill issued
by R.Y. Cadmus. Sent sos
from USS Milwaukee, Jan.13
1917 (Stook last radio watch
when wrecked at Samoa
Beach, CA) Sailed many of
the early day ships. (Picture
taken by late Charlie Lee -
Director Chapter III)



The active chain of stations comprised: Seattle, San Diego, Portland, Medford, Central Point, Sacramento, Phoenix, El Paso, Fort Worth, Chicago, San Francisco and others.

To span the Pacific Ocean a station using 40 KW was erected in Honolulu. The other stations used a D-C generator of 500 to 1000 volts, choke coils, arc and loading inductance to feed into a "T" type antenna. The arc was water cooled and current went between a copper positive electrode and a carbon negative electrode. This was put in an intense magnetic field, and in an atmosphere of gas, generally denatured alcohol.

Keying was accomplished by shifting the wave length rather than keying part of the circuit voltage. The easiest way to do this was to short out several turns of the inductance with relays thus changing the wave length about five percent. All of the time energy was going into the antenna, and it took a sharp receiver to tune in the signal because of the blocking effect.

The distance covered between Los Angeles and San Francisco was 350 miles, using 12 KW as typical or the power needed. At night, San Diego using 5 KW could contact San Francisco. During the winter months the 12KW station in San Francisco could reach out to El Paso during the day time, a distance of 900 miles but not good enough for a commercial traffic service net.

The towers at San Francisco were 440 feet high and 600 feet apart. The antenna drew 40 amperes of current when loaded to 35 KW. During 1912 the distance covered was 2300 miles and 2500 words of press could be handled each day at the rate of 25 cents per word. Between S.F. and Los Angeles 300 messages were sent each day on 3260 meters.

During the period 1911 to 1912, the interesting phenomenon of skip distance became well known. For instance at Phoenix the signal from San Francisco would become lost and yet the compensating wave which was higher in frequency would still come through. This was noted especially at night fall, yet the longer wave could be heard in El Paso, Texas. Thus the operators reasoned that propagation was being disturbed by refractive power of the clouds bending the waves. This was before it was known about the various reflective layers in the atmosphere.

On Dec. 8th, 1912 communications were established between San Francisco, Washington D.C. and Honolulu using 35 KW.

Continental Wireless Company

The biggest competitor to United Wireless during 1910-1911 was the Continental Wireless Company. They had a 5 KW station located in Seattle on Queen Anne Hill with the call letters S2. Another station was located in Tacoma with the call O2. The stations could not get contracts with any ship stations and soon had to close shop. Joe Hallock was an operator for them in 1910.

The Continental Wireless Telegraph Co. when they were on the air operating had to divide their transmitting time with United. Prior to 1912 when the 600 meter assignment went into effect, ships and land stations had any wave length they chose, some longer and some shorter. With crystal detectors and Type D tuners, this didn't make too much difference. If a transmitter started up in your area, you usually heard him, then proceeded to tune him in better. All this spark traffic generally caused interference problems with the Navy Yard Station NPC at Bremerton who also had to maintain contact with various naval ships. Thus a gentleman's agreement, that permitted the Navy to transact its business on the first half of the hour, during which all other stations would remain silent. Then at the half past the hour the Navy would remain silent for the commercial station to carry on. After 1912, 600 meters was assigned to the ship-to-shore traffic.

The one ship contract that Continental had was the Rose City with the call H2 during 1906 to 1910. Morse code was used in place of Continental Morse code. The Rose City later became the Rose Isl after many years carrying sugar to Hawaii and the bottom rusted out. It ended its days as a gambling ship anchored off San Pedro, filled with concrete to take the place of the engines which were taken out. Originally the ship was an old U.S. Army transport the Ft. Lawton.

The Pacific Wireless Company 1902-1906

The Pacific Wireless Company had a circuit between Los Angeles and Catalina Island during the years 1902-1906. This station handled a good many news items for the local population of the Island. The newspapers published the results of the Jeffries-Fitzsimmons fight on the Island many hours before the local steamer arrived with the news.

One morning two fellows left Avalon on the 5 o'clock boat before it was discovered that they had taken the cash and expensive wine from the Metropole Hotel bar. Avalon citizens belived from previous experiences that such thieves would not be caught because the infrequent boats provided such a head start. The hotel manager sent a wireless message and the result was the police met the boat at San Pedro and picked up the men.

The Avalon circuit continued to operate for 21 years. I wonder who all the operators were during this span?

The Pacific Wireless Company was in the process of establishing a high power station on Mt. Tamalpais when the San Francisco earthquake struck and destroyed much of the equipment.

International Code - Only Universal Language Understood Worldwide

Other companies:

There was a two station circuit between Seattle and Roche Harbor, Washington. These stations were operated in the interest of the Roche Harbor Lime Company. Roche Harbor is on San Juan Island and just a few miles from Friday Harbor. The Roche Harbor station had the call letters RH and Seattle HC, which were the initials of the owner and operator H.C. Cox. In combination was also a boat the ARCHER which carried lime to Roche Harbor and its call letters were AR. The installation on the Archer was made by Mr. T.C. Smith a friend of Mr. V. Kraft.

Another company station in the Northwest was the Massie Co.

KPD Friday Harbor

This station was established to relay between the ships at sea, and Seattle which was too far inland to hear most of them. Most of the ships were equipped with either a one KW or a 2 KW spark set, not enough power to contact Seattle when at sea. The receivers on shipboard were the same as the land stations, a crystal detector. This combination of transmitter and receiver on 600 meters only maintained communication several hundred miles at sea and less over land depending on whether it was day or night.

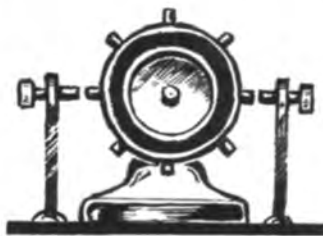
At sea, ships could easily maintain contact with Port Townsend, but California or Orient bound steamers turning west into the Straits of Juan de Fuca started to loose contact very rapidly. Alaska bound ships likewise had trouble after passing the San Juan Islands. Thus KPD was built so that its signals carried strongly to Cape Flattery the entrance to the Pacific Ocean, and north to the Seymour Narrows and extended the range of the Seattle station about 100 miles. Now steamers could call KPD as they rounded Cape Flattery, and send docking messages on through KPD to Seattle eight to ten hours before reaching port.



Expert witnesses at court trial of the Marconi Company against Kilbourn & Clark held in Seattle during April 1916.. Picture is primarily to show Mr. C. B. Cooper who is 5th from the left in center row. Cooper was very active in UWT during the early days of installation. Others who are well recognized are as follows: BACK ROW: Prof. Magnussen (EE - Univ. Washn.), V. Ford Greaves, Francis Ryan. CENTER ROW: Roy Weageant, Mr. Terrill, Ellery W. Stone, Frederick Kolster. FRONT ROW: Attorney, Greenleaf W. Pickard, Mr. Betts (Attorney) and F.N. Waterman.. Picture comes from Seattle section IRE historical file and was furnished by member Warren L. Green with cooperation of Robert S. Palmer.



W.A. Vetter and Wood operators on the SS Bear 1910 at the Portland Exposition. Vetter 4731 17th St. S.F. Bill operated KE, St. Helens, Ore. 1911-12.



Cliff Watson, 1917
SS Saturn

Watson, Clifton H. CMDR USNR "RM"
750 Albion St., San Diego, Calif.

Cliff's interest in wireless started out in 1905 when he read of Marconi's achievement sending a signal from Glace Bay, N.S. to Clifden, Ireland. He first started experimenting with a magnetic coherer and a spark-coil which transmitted signals the full width of the room.

During the Lewis and Clark Centennial in June 1905 Cliff got to go aboard the USS Charleston and see the 2KW spark set. Several other warships also came to Portland and through a personal acquaintance with Admiral Fullam, Watson looked over some real Navy wireless equipment and shortly became the fourth amateur station to get on the air in Portland.

The first wireless job Watson had was at the Dewey Mine near Grangeville, Idaho. When he was 13 years old he was handling traffic for the United Wireless Telegraph Co. station "PE", Portland. This was not uncommon when the average age of operators was 19 years.

During 1911 young Cliff took the examination for commercial license which was not needed up to this time. Starting to college Watson spent the summers operating on the Alaskan ships and coast wise. Some of the old namesakes, SS Chehalis, "NA", SS Senator, SS Humbolt, SS Oliver J Olsen and shore stations PE, DZ, EE, PA to mention a few.

Looking back one of the experiences on the Senator which ran into a terrific storm off Cape Serichef in the Bering Sea and for three days no one knew if they would make it to Unimak Pass and calm water or not but they came through. Another time Cliff answered an SOS from the SS Spokane in distress off Alaska and directed some of the rescue work receiving \$25.00 for his share of the salvage money. It wasn't until 49 years later that he met the operator of the SS Spokane J.F. Hammil.



"KE"

United Wireless Station at St. Helens, Oregon

Left to right - Cliff Watson, Jess B. Weed and Bill Vetter. Picture taken June 21 1910 on station steps. Watson reports the engine house is on the left and the operating room on the right. Watson [left] is present night operator. Weed handles the day shift and Vetter was former night operator. Cliff said .." This is a very enjoyable assignment"

Radio-Telegraph Opened Doors for Commerce and Industry

(Continued from Page 34)

Clifford Watson

During 1913 Watson was employed by the North West Electric Co. as an operator at their power plants using wireless for dispatching. In 1915 he installed five stations for the Montana Power Company which went off the air during the war in 1917. He then accepted the job as Radio Inspector at Seattle relieving Bennie Wolf who had been called into the service. Later Cliff went to Mare Island Navy Yard in charge of the Wireless Laboratory until 1921. Joe Hallock formed the Hallock and Watson Radio Corporation, constructors of broadcasting stations. Later on he became associated with the Portland Bureau of Police and installed their first wireless station "KGPP" where he remained until 1941 when he was called into active duty with the U.S.N.R.

Since the end of the war Cliff Watson has been an electronic engineer with the U.S. Naval Electronics Laboratory on Pt. Loma. As Cliff looks down the bluff, he remembers when he rounded the point in 1910 as a wireless operator. Little did he realize looking up at the hill, that someday he would be working up there. If they ever have wireless in heaven, I think Watson will be one of the first operators. Good luck Commander! To a real old timer.



Old Timer

Joe Hallock

1917-S.S. Alaska

Joe started out in 1906 building a "Rhumkoff Coil," and "Wehnult Interrupter." The signal sounded like a spark which was a cross between a sore-throated bullfrog and a Jersey cow with the heaves. After a few months of "no contact," he built a 2 KW core transformer in oil and a glass plate condenser with an open spark gap! Now the spark signal was audible down the street far enough to contact Charley Austin "SN" the first amateur in Portland. His station soon ended in a blaze of glory by burning a hole in a large portion of the roof, which Joe states, "Hasn't any idea how it happened."

By 1909 Joe broke in at the old United Wireless station "DZ" in the Perkins building in downtown Portland. During 1910 he operated at 02 a Continental Wireless Co. station and then going back to "DZ" working for Jess Sweitzer who was the Chief. There was another operator during the daytime, a very attractive blond girl in her twenties. Her name was Abba Lindsay and she dressed in a snappy blue marine operators uniform and made quite an impression on the customers.

When United went out of business Joe had to shift to wireless operating at sea. Some of the ships, SS Norwood, SS J.B. Stetson, SS Chehalis, SS Rosecrans, SS J.A. Chanslor, SS Humbolt, SS Santa Rita, SS Nevadan, SS Admiral Schley, SS Joseph Pulitzer, SS W.S. Porter beside a few shore jobs.

"TILLY" from Tillamook



She listens to "PX" from PX



Operator H. Campbell at the UWT Station, "PM" Eureka California. It was taken July 23 1912

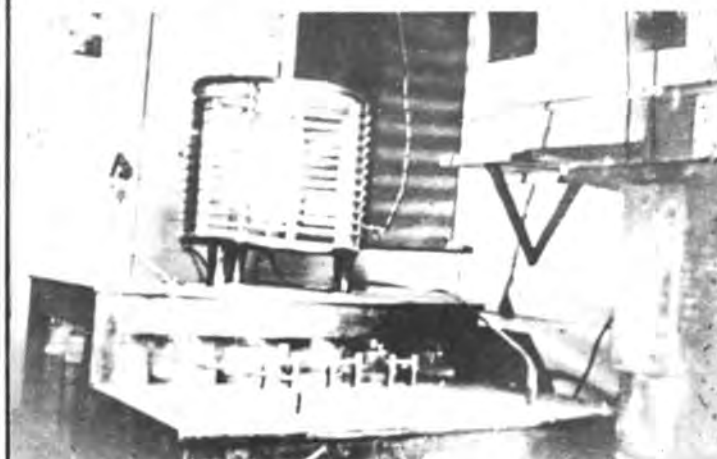
'PM'-Eureka



Unknown Operator standing at the door of the Eureka ["PM"] station's flower garden - UWT.



United Wireless Station "PM" at Eureka taken circa 1911-12 showing 2 KW Spark and Helix.



United Wireless Station "PM" at Eureka, Calif., showing receiving position by window

'PX'-Marshfield



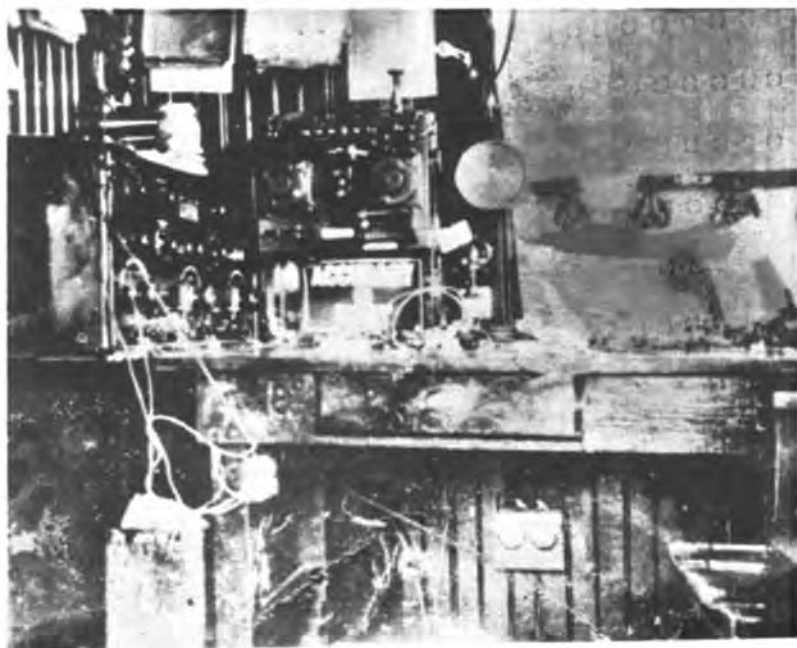
United Wireless Station "PX" Marshfield, Oregon

The Marshfield station changed its name to Coos Bay, Oregon. Ships coming up the coast losing contact with Eureka "PM" shifted to copy "PX" until they could reach "PC" at Astoria on the Columbia River.



Station at "Wireless Hill" located between Marshfield and Coos Bay. Picture from collection of A. E. Richmond, Portland.

Wireless Brought Safety to Ship & Plane Travel - Still Does !



KPH 1916

This is a picture of the receiving equipment at KPH. On the wall is the old Marconi standby receiver with carborundum detector. On the left is the Marconi 101 receiver with galena crystal. At the extreme right is the antenna switch, then the telegraph keys and switches to control the rotary spark gap.

With this receiver, operator Arthur W. Peterson had a record of over 6000 miles. The SS Floridian and Dick Johnstone worked direct with JOC and JCS Japan, but only for a few moments. Both of these are real records for a crystal detector receiver. Six months after this photo was taken, the station was struck by lightning. Every bit of the equipment to the left of the photo was demolished instantly. The blast was so furious that it did not catch fire but blinded Johnstone temporarily. It also knocked off 20 to 25 feet of the 250 foot mast. The other mast was not injured and a temporary mast and aerial was rigged putting the station back on the air in a few hours. Operators, Frank W. Shaw, Arthur W. Peterson and Richard Johnstone.

Cmdr. R. Johnstone photo



VIEW - BOLINAS, CALIFORNIA

The Marconi Company's complex of stations - KPH (Marine) and KET with transmitting station a short distance from the village of Bolinas and receiving station near Marshall. Many who have visited KPH or KET have lunched in Bolinas. Of course most of the early operators and stations staff stayed at the "Marconi Hotel" (Local 'nickname' known to us all. This was called Marshall - a few miles north of Point Reyes Station and Bolinas.

'KPH'



The 'antenna farm' (in distance) and staff quarters at Marshall, CA. "Ye Ed" visited KPH/KET circa 1926 as guest in THE Hotel. Chief Vernon M. Goldsmith of KPH was shipmate of the editor back in 1919 on WBD - Santa Cruz Pacific Mail.



Picture of "Dick" Johnstone in "Dynamite" This picture was taken on Sept. 8 1917. Dick was working a watch at "KPH". It was said that "neither beast nor fowl, nor man was safe on the road when "Dick" and Dynamite" was 'cruisin' with this 'sleek' roadmobile.



DICK JOHNSTONE

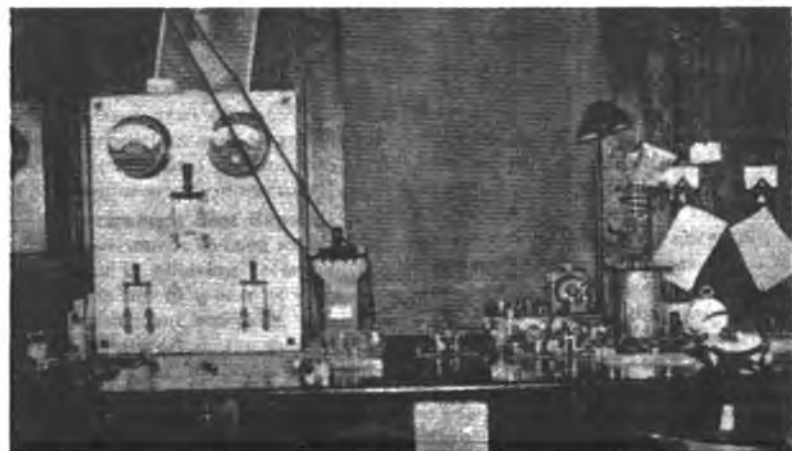
Standing in front of the masts at KPH, Apr. 1917 when the U.S. Navy took over coastal stations. Masts are 250' tall and 500' apart. Dick was on duty KPH in 1916 when lightning hit this very mast and knocked off 25 feet and burned all receiving equipment. Marcon Wireless Co. owned station at this time. During the war KPH changed to NWO and went back to KPH in 1919.



Marconi Wireless Receiving Station at Marshall, Calif. This unit was used for marine traffic.



Seated is Station Manager, Frank Geisel [5-SGP] Second President of SOWP. He was Operator and Manager for nearly 40 years at KPH. Standing is member William N. Hayton who relieved Frank as Station Manager. Frank became a SK 7-12-84 and Bill Hayton SK Oct. 4 1980. He had only been retired a short time.



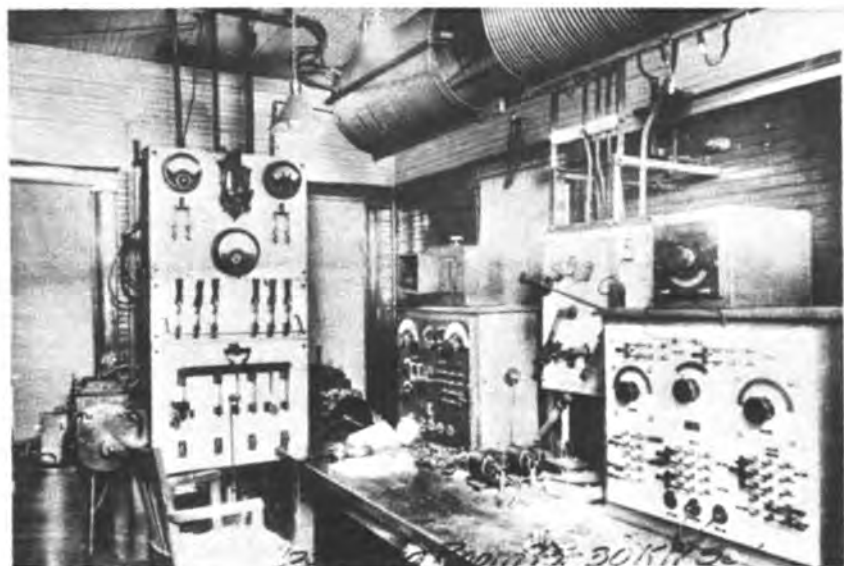
An interior view of the old United Wireless Station in San Francisco - (PH).

Radio History is a Fragile Record - Preserve it While You Can !

KFS - SAN FRANCISCO



KFS - SAN FRANCISCO BEACH STATION - 1910
The station was equipped with a 12-KW Arc. at this time. It was placed in operation July 1910 with the original 12 KW Danish Arc. Two 300' masts were constructed as towers for the facility.



KFS - SAN FRANCISCO BEACH STATION - 1911
Interior of the "Beach" station prior to installation of its 100 KW Arc. The Arc in use at this time was a 30-KW unit. When the 100 KW unit was installed, Federal started a press rate of 2-cents per word to Honolulu against the prevailing 16 ¢ by cable. PX copy rose from 120 words per day to 1500 of mainland news. Picture from Sparks IV (From collection of Thorn Mayes).



This group of SOWP members accepted the invitation of Mr. John Brundage, Manager of ITT Station "KFS" to visit their facility back on March 24 1981. Shown left to right: Mr. John Brundage (Host); Jerome F. Zobel [W6ARA]; Eben K. Cady - Charter Member SOWP (54-SGP) and former Manager KFS; Emil (AI) Holgerson W6OFL who worked for ITT/Mackay at Lobitos from 1934 to his retirement; Jess O. Hill (W6BFU); William Cunningham (N6HS); Gerald Hiltz (W6GJI); Landon C. Fickel (W6RDW).

PACIFIC WIRELESS COMPANY



PACIFIC WIRELESS COMPANY STATION
Built on Mt. Tamalpais in Spring 1906 just prior to the Earthquake. Records do not indicate it was commissioned



CREW AT PACIFIC WIRELESS COMPANY
station on Mt. Tamalpais taken Feb. 22 1906 A.F. Krenke who was in charge is pictured third from left



KFS - Showing the HF position used during WW-2.
(See story in Sparks-Journal Vol.3 No.1 Page 22)



WAMCATS

We are not overlooking the part the Alaska Communication System - ACS (commonly known as the "Wamcats" played in bringing Wireless to the Pacific when they linked Alaska with mainland U.S. in 1900. This is a thrilling story of the Washington - Alaska Military Cable & Telegraph System. We published the story in detail in our 1973 Year Book edition. Since we have many new members plus additional material from members G.L. Moorman Larry A. Burrow, Jim Webster and several others, we plan to feature it in the next issue of Sparks Journal. It is a fascinating story of "Man's fight with the Elements."

NPG - NWO

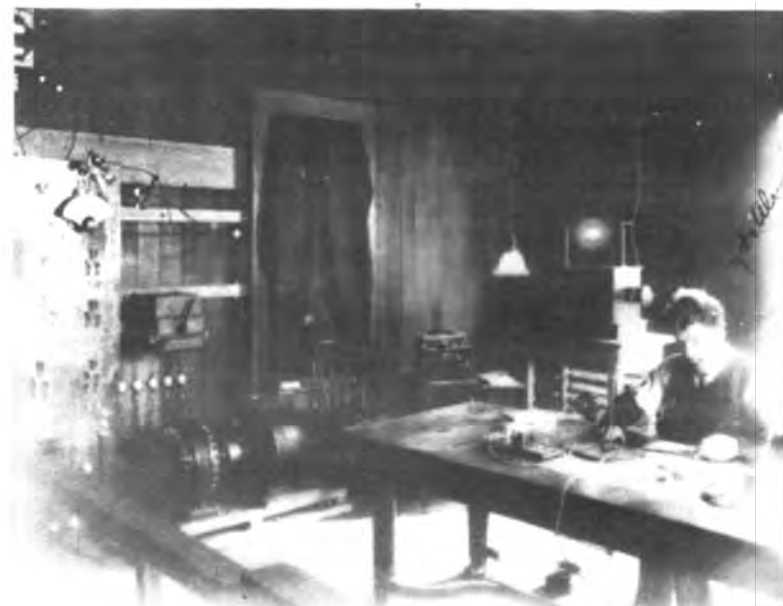
"NWO" was the call used by NPG during the war years in handling traffic with commercial vessels. We have publish a rather comprehensive story on NPG recently so will not repeat at this time.

The Pioneers Had No Blueprints to Follow They Did It The Hard Way - They Used Their Brains !

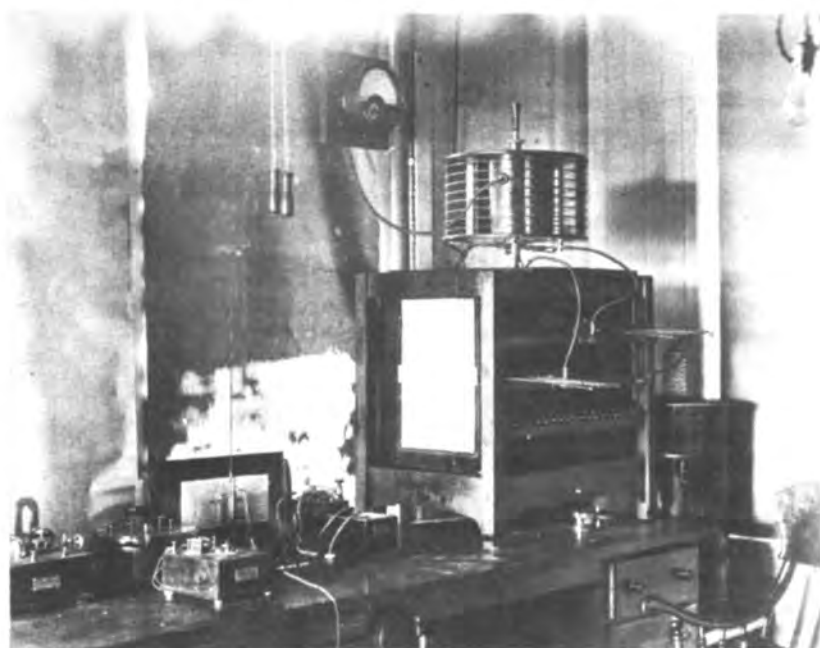


Early United Wireless Station "PJ" located in San Pedro, Calif. The call later became KPJ. This picture was taken in 1911. From the Ed Marriner Collection.

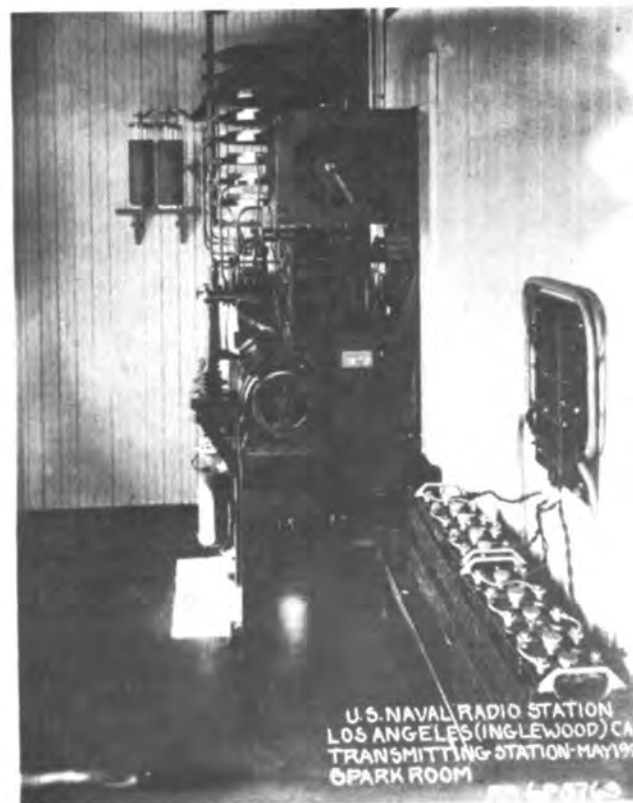
The Pacific Wireless Company established a service between the mainland and Catalina Island in 1903. Mr. A. F. Krenke was the Chief Operator for this company. Station (call) "A" was located at Avalon and Station (call) "G" was located at 7th St. and Alameda in Los Angeles.. Picture right is the Catalina Station and left the tower of station located right and lower in picture.



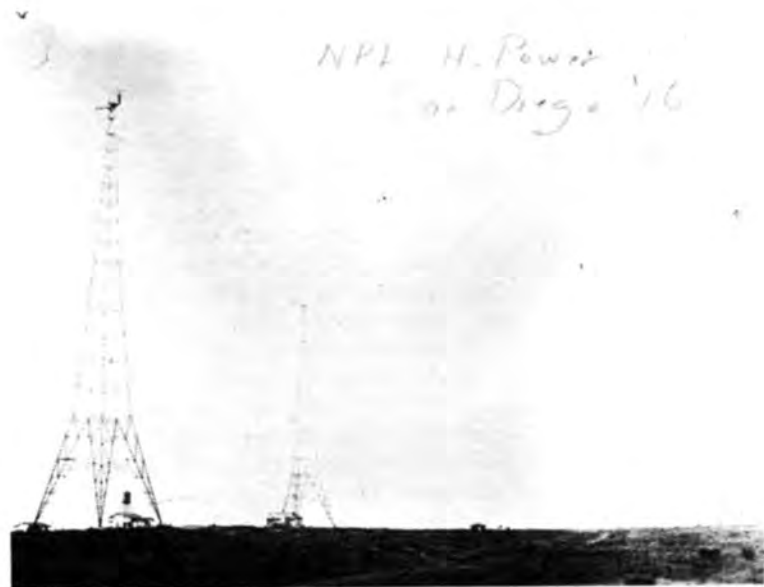
Operator A.F. Krenke operating Station "G" of the Pacific Wireless Company located at Seventh and Alameda Streets, Los Angeles, California in 1903.



NPL - POINT LOMA about 1905. Shown in the picture is the 'coherer detector at left. On the wall is the hot-wire ammeter and in front the primary and secondary conductive coupled oscillation transformer. Spark gap is inside the muffler. Below it is the glass transmitting condenser, back of it the high voltage transformer. To left of the condenser is the transmitting key. Ed Marriner Collection.



U.S. Naval Radio Station, Los Angeles (Inglewood) California, taken in May 1920. Call letters were "NPX". Picture is the Transmitter 'Spark-Room'. NPX furnished "PG" service until KSE and KOK took over the commercial traffic in the Los Angeles area. Both stations are now but a memory.



Towers at NPL San Diego, CA. 1916 East of Town. Jo Hallock and Cliff Watson climbed them many times.

Shipped the stern lines and sailed into
the night that has no dawning.
May we always remember them.



Honoring Our Officers Whose Keys Have Been Silenced

Cmdr. Karl H.W. Baarslag



While we reported the passing of Karl on Jan. 4 1984 in the NETBUL we have not recorded it in the Journal. Karl died at his home in Tequesta Florida, following a long illness. Many of the 'old timers' knew him as he served on several East Coast ships yachts and also in the U.S.N. during the war. He is probably best remembered for the book

he authored titled "SOS TO THE RESCUE" Karl was the Society's FIRST HISTORIAN. He also served as our Southeastern Coordinator for many years and has contributed considerable memorabilia for reference and publication. He authorized the Society to reprint any of his publications as space and interest permitted. Several have already been printed and more will be. Karl also published a book titled "Famous Sea Rescues" and "The Coast Guard to the Rescue". Unfortunately he was unable to furnish copies. Karl was buried near the seashore at Wimble Shoals near Rodanthe N.C. where he spent his summers. Our profound gratitude for his loyal assistance and dedicated interest in SOWP.

Raymond E. Meyers - Sr.SGP-89



"Ray" Meyers became a Silent Key Dec. 13 1984. He had been in poor health for some time but he 'made' the OOTC meeting in St.Louis before closing the key at W6MLZ on his last trip to "Happy CQ grounds where static and QRM are unknown and 'Sigs' always good ! Probably unknown to many except our early members

We'll Twine A Wreath

by Benjamin Beckerman

*We'll twine a wreath in the morning
Hours
When Maytime Zephyrs blow
A chaplet of starry springtime flowers
For the lads who are lying low.*

*In the wreath we make, the vine
And rose
We will deftly weave between,
The names of the men that the
Service knows,
To keep their memories green.*

*We'll hang our wreath on the
Fountain there,
Where crowds may gather to weep
For the boys who feared not to do
And dare,
Till their ships went down
In the deep.*

*And every year we will come again
To their monument near the sea,
And bring our wreaths for the
Wireless men-
The lads who served at the key.*

First published in Marconi Service News
January 19, 1917



Ray was our FRIST V.P. AWARDS and he also did a lot of "P/R" promotion for the Society. Your Editor was on Ray's Staff circa early 1950's when he chaired the So. Calif. Interference Committee for Bernard Linden of FCC.] We have met frequently over the years. His history is so well known to all, we will not repeat here. Suffice to say "Ray" was one of Amateur Radios finest 'Ambassadors'



GERALD A. Whittaker - SGP-6



Perhaps few, except early members will recall that 'Jerry' was our FIRST Treasurer back in 1968 after organizing.He also served as a Director and has been responsible for bringing many of his old friends into SOWP.

"Jerry's" story appeared in the Bristol Bay Edition of Sparks Journal (4-2) back in Aug. 1981.

Few have seen as much variety of experience as Jerry in his operating years - from a small 'windjammer' to Alaska and many rust-buckets in between great liners like the President McKinley. His outstanding life career was as Chief of the CAA's (now FAA) Operations throughout Alaska during WW-2.He did a superb job of doing the 'impossible' under the most trying of conditions. We sincerely regret to report the silencing of Jerry's key at W6FC on Jan. 3 1985 after a bout with pneumonia. I am sure the Chief Operator of our Celstial Chapter will recognize him as a candidate for one of his very top assignments. "73" Jerry from us all.RIP.

'Thank You' Ed Marriner



Edmund H. Marriner - P-313

Epilogue

At the risk of being characterized as redundant [see Page 28] the preceding eleven pages of Radio-telegraphic History were mostly from material the "Ed" had collected or had publish in magazines such as "Ham Radio" (etc.) during the 1950's and 1960's. We think you will agree that Ed's research uncovered quite a record of the early days which might have been lost to posterity had he not heeded the call to collect and preserve this memorabilia.

The picture at left shows "Ed" at work in the U.S. Navy Electronics Laboratory in San Diego a few years astern. Ed worked at the "Lab" from 1944 until 1969 when he retired. Ed's first assignment was aboard the M/V South Africa in 1933; following he was assigned to the SS President Lincoln, SS Cuzco, USS Pensacola and Wright, then a tour of duty in the CAA and also the FBI at various stations.

"Ed" has long been a amateur 'buff' from 1931 when he received call W6XM which he has retained over fifty plus years. After retirement, Ed turned to journalism and has had many articles printed in various radio and other publications. Many have been published in the Society's publications.

Ed's QTH is 528 Colima Street in La Jolla, Calif. 92037. Twisted pair number is 619/459-5527.

- 30 - Bill Breniman, Ed.



Shipwrecks of the Pacific Coast

1931 - Voice of 'WRH' Silenced 'Harvard' Wreck, 1931

By Walker A. Tompkins
News-Press Historian

Point Arguello, on Santa Barbara County's western coastline, has been dreaded by mariners as a Pacific "graveyard of ships" for over two centuries.

One reason for so many shipwrecks in that area is the fact that some of the most treacherous ocean currents and highest surf in the world converge on Point Arguello. With Point Concepcion, it forms the promontory where the North American continent turns an abrupt corner to begin its long southeast trend toward the Isthmus of Panama and the land connection with South America.

WRECK LIST

Almost everyone is familiar with the major shipwrecks near Point Arguello in modern times — the gold-laden passenger steamer "Yankee Blade" in 1854, the "Santa Rosa" in 1911, the nine U.S. Navy destroyers that went on the rocks near Honda Creek in 1922 in the worst peacetime multiple disaster in Navy history, among others.

Less known, and especially difficult to find photographically recorded, was the grounding of the 3,737 ton coastal passenger ship "Harvard," sister ship of the

"Yale," on Memorial Day of 1931. The disaster generated overtones of insurance scandal and the exact reason for the grounding remains unsolved 40 years later.

The day after the Harvard was wrecked, a photographer flew by and took a number of pictures of the stranded vessel.

San Francisco Chronicle
ALL SAVED. DRY SHOD.
IN HARVARD CRASH

497 PASSENGERS

The Harvard had a steel hull 76 feet longer than a football field. She carried a crew of 135 and had passenger accommodations for 466, although she was carrying 497 passengers at the time she was lost.

Both the Harvard and the Yale were built in 1906 in Chester, Pa. They were brought to the West Coast in December, 1910, and remained on the Los Angeles-San Francisco run until 1918, when they were purchased by the government for use as troopships in World War I.

In 1920 the ships were purchased by the Los Angeles Steamship Co., a group of Los Angeles businessmen who operated under the familiar name of LASSCO. The Har-

vard, extensively altered, was put back on the California run in August, 1921, and was a familiar sight to Santa Barbarans for a decade.

TRAVEL REDUCED

The depression severely reduced steamship travel and in April, 1931, the Harvard inaugurated a pickup and delivery service between Los Angeles and San Francisco. But LASSCO continued to lose money, a point that had a bearing on the ugly rumors that spread in maritime circles after the Harvard was wrecked.

May 30, 1931, was the day she made her last run. She was southbound at 3 a.m. — reportedly at half speed in a dense fog — when she went aground near Point Arguello, about 300 yards offshore.

In response to a radio SOS, the freighter San Anselmo hove to alongside at daybreak, and took aboard all the passengers without incident, later transferring them to the new Navy cruiser, Louisville, which happened to be on her test trials in the channel that week.

Before salvage attempts could be made, the Harvard broke up, just as the Santa Rosa had done 20 years earlier at almost the same spot, and the two-stacker was abandoned as a total loss.

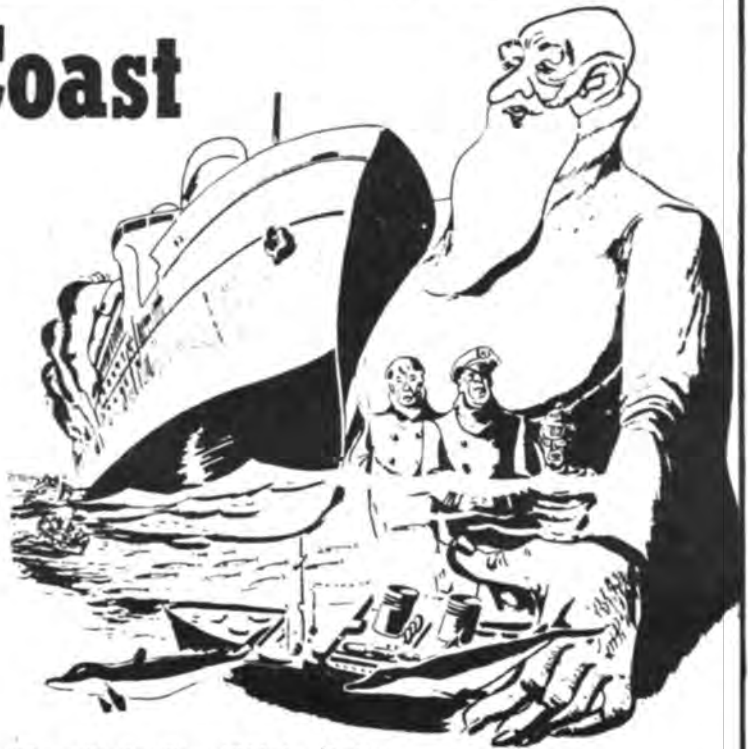
During a federal investigation of the wreck, a number of passengers testified that some of the crew were intoxicated and inattentive to duty. One woman, in fact, sued LASSCO for \$50,000, but failed to collect.

A sensation was caused when the captain of the Harvard testified that there had been no fog when the Harvard struck. Steamboat Inspection Service detectives established that several waiters and one quartermaster were drunk at the time of the wreck. The Harvard's logbook had also been altered to conceal the fact that she was sailing too close to shore.

RADIO BEARING

Thirty-two minutes before the wreck, the officer on watch allegedly received a radio bearing from the Point Arguello compass station, which indicated the ship was steaming directly toward shore. The licenses of three of the Harvard's officers were suspended as a result of ignoring that warning.

The Yale was withdrawn from service in 1935 and was recommissioned by the Navy during World War II to serve as a barracks for construction workers at an Alaskan naval base, later carrying passengers between the Aleutian Islands. She was finally sold for scrap in 1949.



Gilson Vander Veer Willets (Radio Rex) Operator on the SS HARVARD, atop the Radio Shack back about 1925... Carefree days! "Rex" was The Society's first Historian and a loyal booster of SOWP until he became a Silent Key back in 1976 on January 7th. His first ship was the SS El Oriente/KKV IN 1913.



SS.SANTA ROSA - "GI". Operated by the PACIFIC COAST S.S. CO. went ashore 2 Mi. N. Pt. Arguello, July 7 1911. 4 crew drowned taking line ashore for breeches-buoy rescue. Built in 1884 she completed over 1100 safe coastwise voyages. She was a total loss.



S.S. MARIPOSA - WHY. ALASKA STEAMSHIP COMPANY SHIP ON ALASKA RUN. SHE WAS WRECKED NEAR BELLA BELLA, OCT. 8 1915.

The SCIENTIFIC & HISTORICAL RECORD OF THE EARLY DAYS OF WIRELESS

JUN. 4 1985



"WHATCHA' MEAN BY SAYIN' THAT THIS AIN'T WIRELESS COMMUNICATION?"

***** The "Wireless" - Our Proud Heritage! *****

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Newsletters from the Society of Wireless Pioneers, founded 1968 - Dedicated to the History of Seagoing Wireless Operators -

Special thanks to the following for these documents:
Key [SK = Silent Key, SGP = Spark Gap Pioneers, P = Pioneers, V = Veteran, M = Member, Sparks = Worked at Sea]

- (SK) Ed Raser, W2ZI, Radio Pioneer, Sparks, SOWP #35-SGP
- (SK) Bill Gould, K2NP, Radio Pioneer, Sparks, SOWP #565-P
- (SK) Matty Camillo, W2WB, Sparks, SOWP #750-SGP
- (SK) Dare Robinson, WB2EVA, Sparks, SOWP #2284-SGP
- (SK) Ray Brooks, K2LTX, Sparks, SOWP #1387-P
- Olive Jesse Roekner, VA6ERA, Sparks, SOWP #2891-V
- Spud Roscoe, VE1BC, Sparks, SOWP #2301-M
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